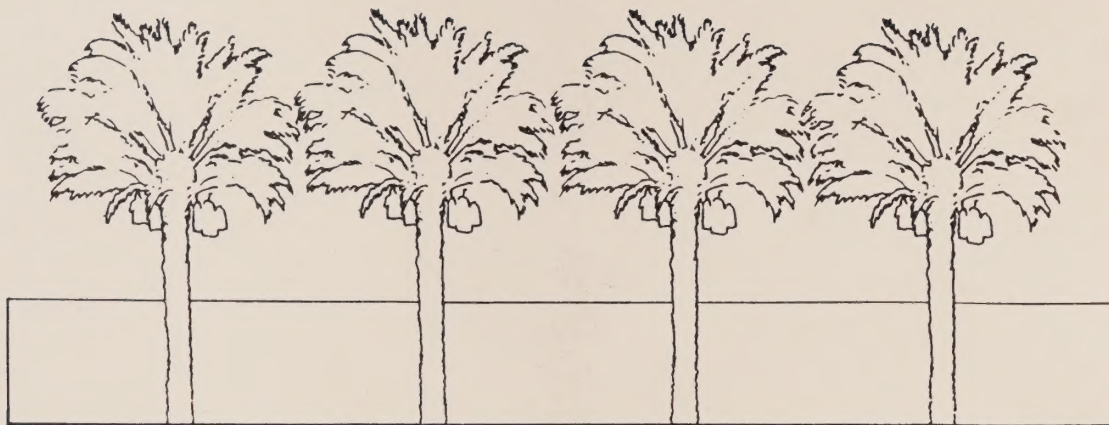


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# **HIGHWAY 111 SPECIFIC PLAN**

## **City of Indian Wells**

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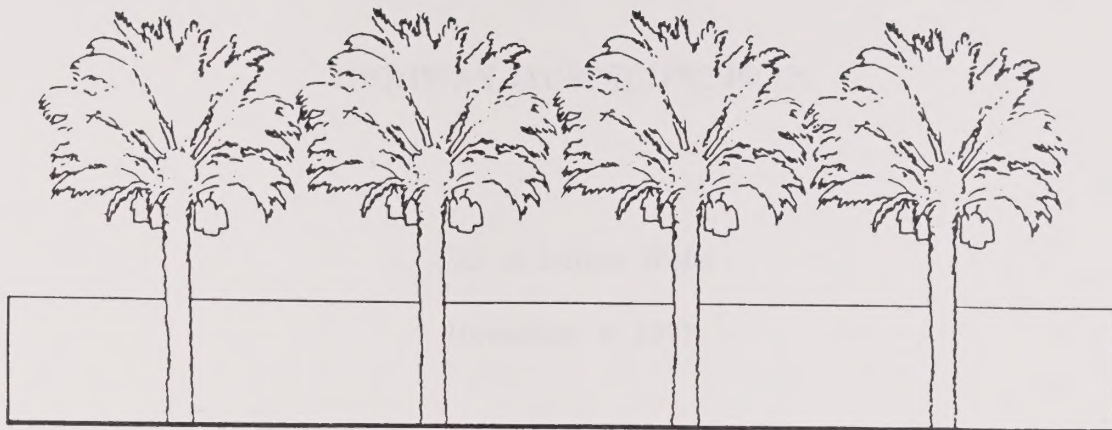
**SCREEN CHECK**

**November 4, 1991**



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# **HIGHWAY 111 SPECIFIC PLAN**

## **City of Indian Wells**

**SCREEN CHECK**  
November 4, 1991





**CHAPTER 21.45**

**HIGHWAY 111 SPECIFIC PLAN**

**City of Indian Wells**

**November 4, 1991**

**Prepared For:**

**City Council**

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## **SECTION 21.45.010**

### **INTRODUCTION**

#### **1. Purpose and Content of Specific Plan.**

The City of Indian Wells, since its founding in 1967 has prided itself on its distinct low-scale desert environment focused on views to the Santa Rosa and San Jacinto Mountains to the south and west. The City has endeavored to maintain an identity different from the typical suburban style communities surrounding it. As development intensifies in the Coachella Valley this special character could be jeopardized. While the development of the desert is inevitable, the Highway 111 Specific Plan will provide a unique opportunity to guide that development with reference to the nature of the desert and specific reference to the heritage of the town.

The Highway 111 Specific Plan is one component in a comprehensive planning process aimed at retaining the unique character of the City; protecting its environmental, cultural, social and economic resources; and insuring new development is compatible with the City's residential character while embracing increased regional housing needs. The Highway 111 Specific Plan addresses issues of land use, density, setbacks, landscape, open space, walls, scale, public amenities, circulation, access and implementation.

Figure 1 illustrates the Regional Location of the plan area; Figure 2, Study Area, is a recent (1987) aerial photograph of the northerly portion of the City of Indian Wells, centered on Highway 111. Figure 3, Development Areas, indicates vacant and recently-developed areas, their General Plan Key, zoning, Land Use designation, approximate size and maximum number of dwelling units permitted, as applicable. Figure 4, Issue Key Plan, identifies the development issues of the Specific Plan which pertain to each of the Development Areas indicated in Figure 3. Figure 5 illustrates the Specific Plan Area. Figure 6, Example Illustrative, indicates how the Highway 111 corridor area might look when fully developed, for illustrative purposes only.

The Plan responds to current regional issues such as conservation of water by extensive use of drought-resistant landscaping materials and limited use of water features; providing an expanded range of housing, that acknowledges the need for affordable housing; and preservation of unique archaeological features and cultural resources. Furthermore, the plan provides an alternative, appropriate to this small residential community, to traditional "commercial strip" development.



## **2. Relationship of the Specific Plan to the General Plan.**

The purpose of the Highway 111 Specific Plan is the systematic implementation of the General Plan; it refines and extends the policies of the City of Indian Wells General Plan. It provides a transition between those policies and detailed design and engineering. The Specific Plan is both a regulatory and policy document. The plan's policies and standards will be implemented by means of regulations, guidelines, land use entitlements, applicable zoning, capital improvements program and redevelopment financing. In addition, the incorporation of the City's overlay zones for 1) public/private golf courses and 2) affordable housing, will further ensure that development within the Specific Plan area occurs pursuant to the policies and standards of the General Plan. Should conflicts arise between other zoning regulations and the standards and policies of Chapter 21.45 (Specific Plan), the latter shall prevail.

## **3. Plan Area Setting and History.**

The City of Indian Wells, in Riverside County, is located in the Coachella Valley approximately half way between Palm Springs and Indio. The Specific Plan area is a 3.5 mile segment of Highway 111, running the entire length of the town from Palm Desert on the west to Point Happy in La Quinta to the east. Today, Highway 111 is the major connector between Coachella Valley towns south of California Interstate Highway 10. In many places along its route the Highway corresponds to the historic Bradshaw Trail, an overland stage route used until the Southern Pacific Railroad was completed in 1869. Indian Wells was the site of one of the overnight campsites on the Bradshaw Trail.

Located within town boundaries was the Cahuilla Indian village "Pal Kavinish", documented since the 18th century as the site of one of the few reliable water sources in the desert. It was at "Pal Kavinish" that Cahuilla legend tells of an ancient well called Tema Kawomal, and recounts the story of Palma Seca, the first palm tree to be created by the Cahuilla deity. Tema Kawomal was destroyed in the 1916 flood, but other, smaller wells have been documented in the area, including one located in the Specific Plan area. These wells are unique in North America, and the well located within the Specific Plan area has the potential to be named a National Historic Monument.

Late in the 19th century, Indian Wells was homesteaded and became a major date producing area from approximately 1900 to 1960. Remnants of the historic date palm groves that once lined both sides of Highway 111 can be seen today in two places within the city. The Specific Plan addresses strategies for retaining portions of these historic groves as key design elements for Highway 111.

During the 1940's and 1950's Indian Wells and other Coachella Valley towns experienced tremendous growth as resort destinations because of their healthful desert environment. From that time, Indian Wells garnered a reputation as a unique and distinctive community because of the political and social importance of many of the individuals who chose this area for their second homes, including President Dwight D. Eisenhower.





#### **4. Goals and Policies of the Specific Plan; Severability.**

The goals and policies of the Highway 111 Specific Plan are concerned with maintaining the unique character and low density residential scale of the City of Indian Wells, while ensuring a responsible program for future development that responds to the housing and public realm needs of the City and is sensitive to the fragile desert environment. The following goals and policies: address these issues within the Specific Plan area; are in accord with the goals, objectives and policies of the General Plan; and form the basis for the guidelines and regulations contained in this Chapter. Projects shall be developed consistent with this Chapter, as required by law. In the event that any regulation, condition, program or portion of this Specific Plan is held invalid or unconstitutional by a California or Federal Court of competent jurisdiction, such portions shall be deemed separate, distinct and independent provisions, and the invalidity of such provisions shall not affect the validity of the remaining provisions hereof.

##### **(a) Goals**

- (1) To provide for new development which enhances the unique identity of the City of Indian Wells, and promotes the public health, safety and welfare.
- (2) To create an appropriate landscape and sound buffer between Highway 111 and adjacent residential developments.
- (3) Within the "oasis" of the City, preserve and enhance the three essential characteristics of the natural landscape on: the desert floor, plus views of the mountains and sky.

##### **(b) Policies**

- (1) Maintain and enhance the existing physical structure of the Specific Plan Area, characterized by formal resort hotel development to the north of the Highway, and informal residential developments to the south.
- (2) Avoid typical suburban strip commercial development in the Specific Plan Area.
- (3) Create a public realm for the citizens of Indian Wells to serve current and future public needs, which may include, as examples, a rose garden, public park, community center, and Cahuilla Interpretive Center as expressed by the General Plan Community Attitude Survey of July 1988.
- (4) Create a land bank to meet the future unknown public facilities needs of the citizens of Indian Wells.



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- (5) Rehabilitate and maintain historic structures and landscape features by incorporating them into the public realm of the City, including for example, the remaining healthy date groves and the Pal Kavinish Indian Well.
- (6) Enhance circulation opportunities within the Plan area, for example by means of pedestrian paths, golf cart paths, bicycle paths, bus stops, intersection and signalization improvements.
- (7) Preserve views to the Santa Rosa and San Jacinto Mountains to the south and west.

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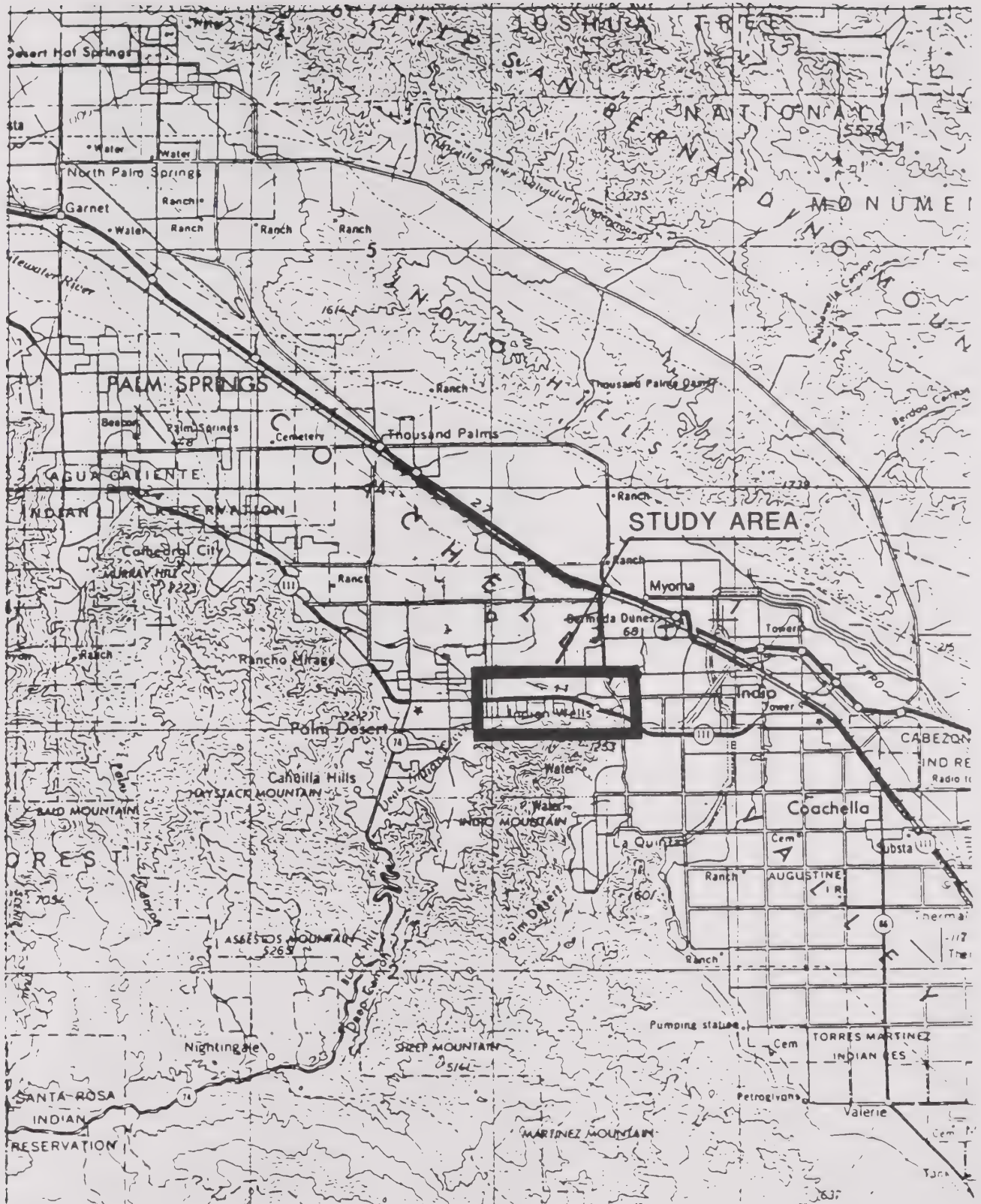


FIG. 1

## REGIONAL LOCATION MAP





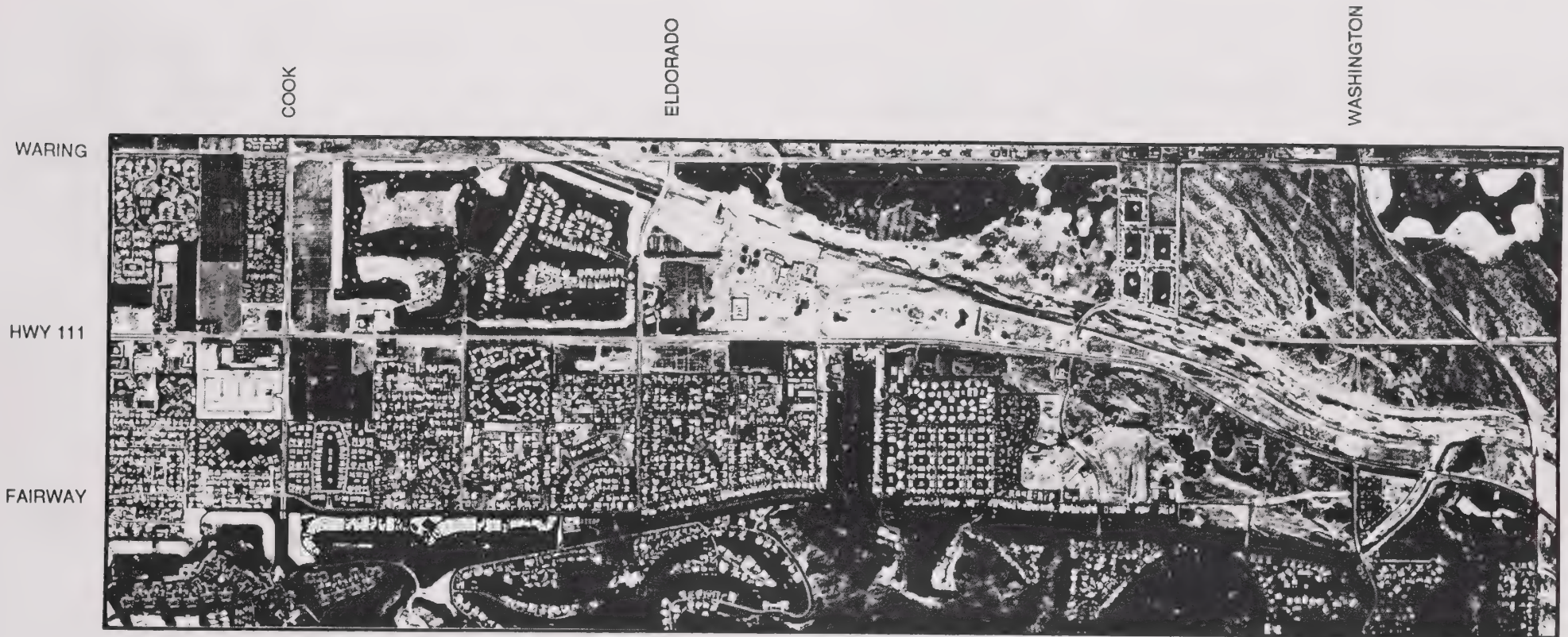
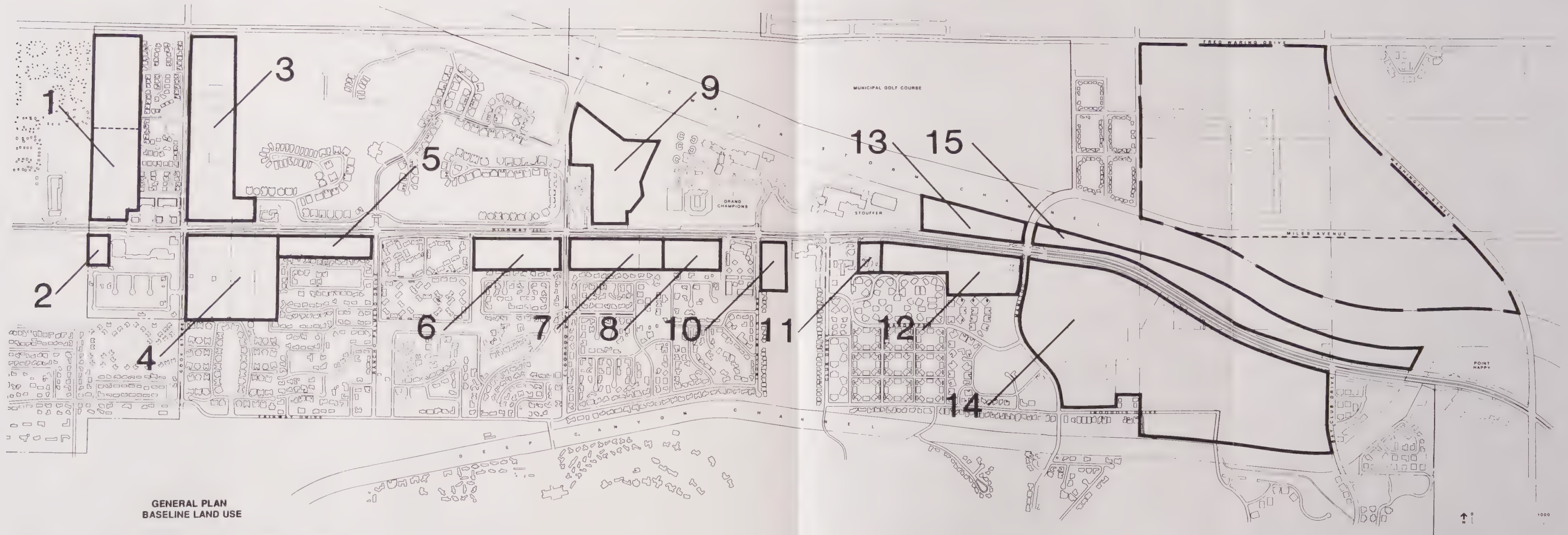


FIG. 2

## STUDY AREA







GENERAL PLAN  
BASELINE LAND USE

Development Area Key	Approx Acres	General Plan Key	Zoning	Maximum Density	Maximum Units
1a	19.78	6.2	RLD	4.5	89
1b	19.50	6.3	RMD	8.75 *	171 ***
2	2.80	10.3	OP	N/A	
3	37.50	2.2	RVLD	3	113
4	35.00	4.1	RVLD	3	105
5	9.36	4.4	RLD	4.5	42
6	13.09	4.5	RLD	4.5	59
7	14.10	4.6	RLD	4.5	63
8	8.80	4.6	RLD	4.5	40
9	30.20	5.3	RC	N/A	
10	6.84	8.1a	RC	N/A	
11	2.80	8.9	RLD	4.5	13
12	23.00	8.9	RLD	4.5	104
13	14.96	5.5	RHMD	15 *	224
14	163.46	8.3	RVLD	3	490
15	36.42	7.1	RMD	8.75 *	319
437.61					1831
16a**	189.50	7.3	RVLD	3	569
16b**	71.36	7.3	RVLD	3	214
698.47					2613

\* Affordable Housing with 25% Density Bonus

\*\* Sphere of Influence

\*\*\* Requires General Plan Amendment

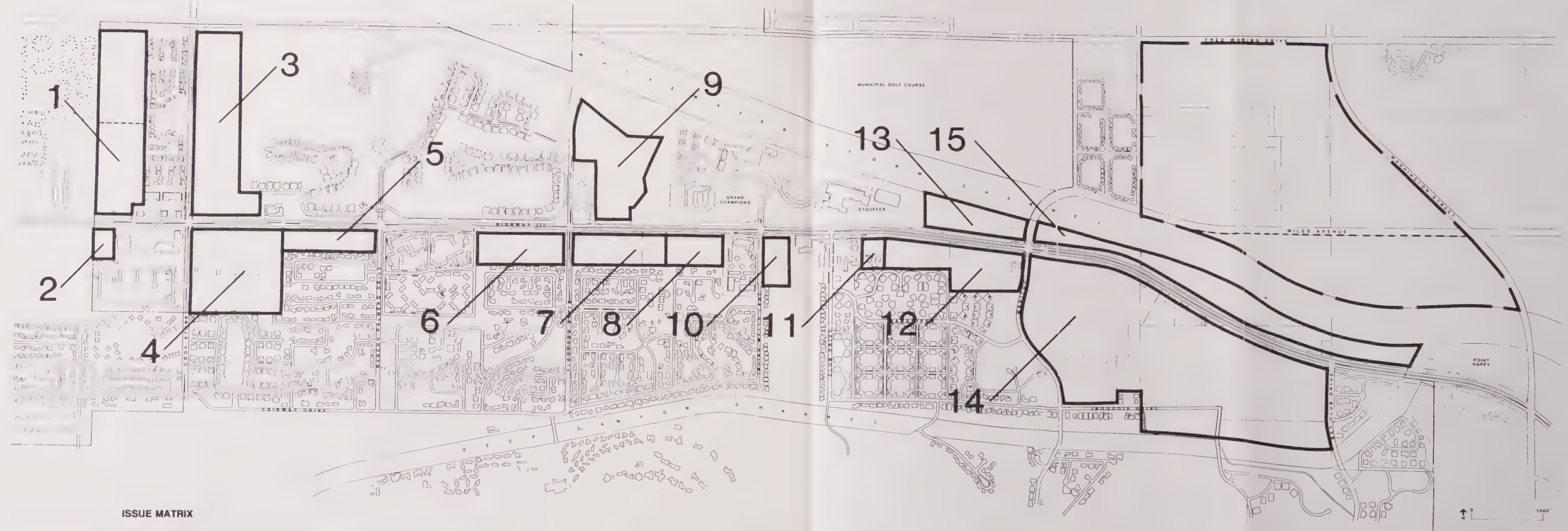
- DEVELOPMENT AREA
- - - SPHERE OF INFLUENCE
- - - - - SUBAREA DIVISION LINE

FIG. 3

## DEVELOPMENT AREAS







ISSUE MATRIX

Development Area Key	ISSUES*					
	A	B	C	D	E	F
1	X	-	-	-	-	-
2	X	-	-	-	-	-
3	X	-	X	-	-	X
4	X	X	X	-	-	-
5	X	X	-	-	-	-
6	X	X	X	-	-	-
7	X	X	X	-	-	-
8	X	X	X	-	-	-
9	X	X	-	-	-	-
10	X	-	-	-	-	-
11	X	-	-	-	-	X
12	X	-	-	-	-	X
13	X	-	X	-	-	-
14	X	X	X	X	-	-
15	X	X	-	X	-	-
16a	-	-	-	X	X	-
16b	-	-	-	X	X	-

KEY\*

- A Landscape
- B Reciprocal Easements and Access
- C Public Facility Overlay
- D Future Precise Plan Study Area
- E Sphere of Influence
- F Recently Developed Area

- DEVELOPMENT AREA
- - - SPHERE OF INFLUENCE
- ..... SUBAREA DIVISION LINE

FIG. 4

# ISSUE KEY PLAN





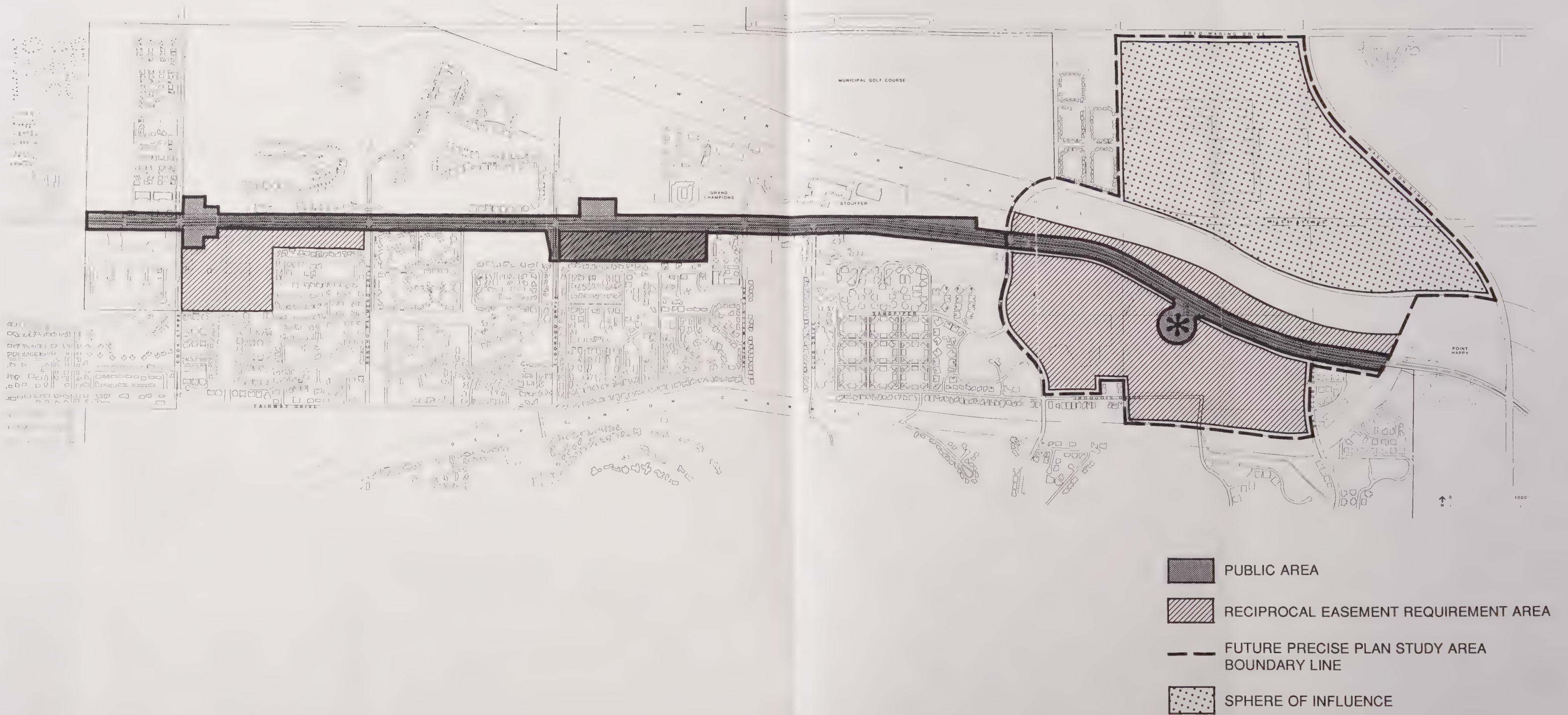


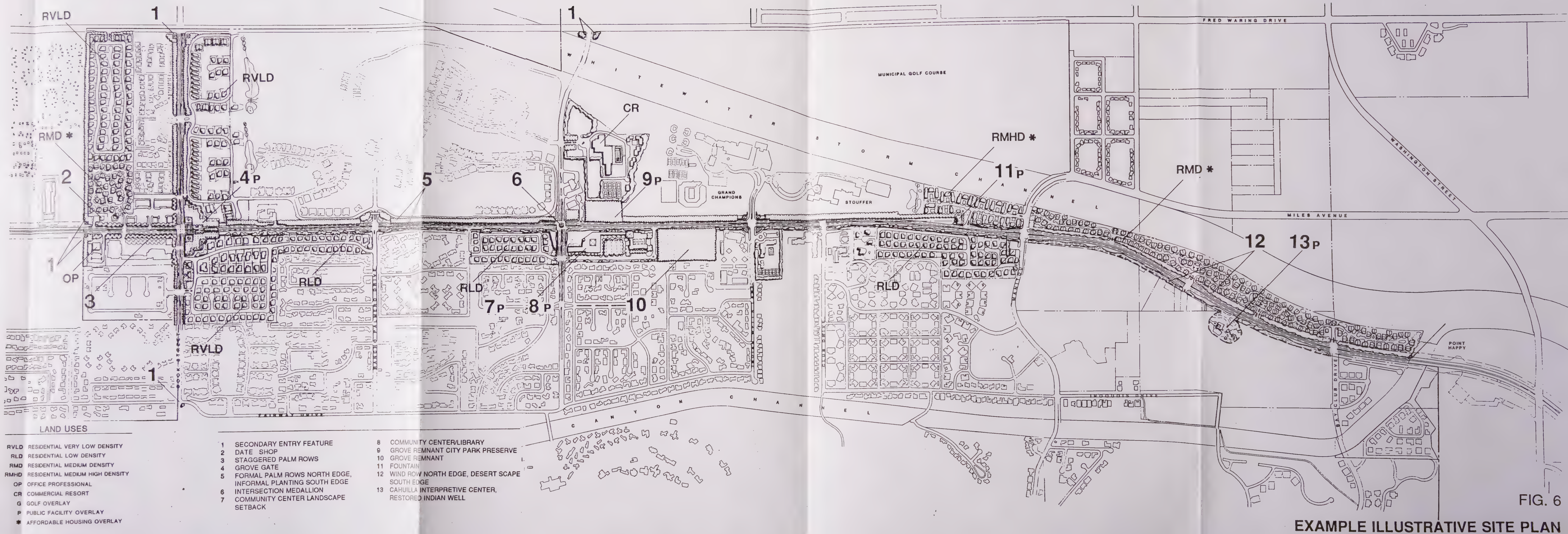
FIG. 5

## SPECIFIC PLAN AREA

JOHNSON FAIR AND PEREIRA ASSOCIATES











## SECTION 21.45.020

### LAND USE AND PUBLIC FACILITIES OVERLAY ZONE

#### 1. Concept.

Compatibility with General Plan and Zoning: Land Use within the Specific Plan Area shall be consistent with the Land Use Policy of the 1988 General Plan, as shown in Figure 3. Except as provided in this Specific Plan, land within the Specific Plan Area shall be developed in accordance with the Development Standards of the 1988 Zoning Code of the City of Indian Wells, effective April 15, 1989.

Purpose: The purpose of the Highway 111 Public Facilities Overlay Zone is to encourage community facilities, such as museums, a community center and family parks to locate along Highway 111 as provided by the City of Indian Wells General Plan, Public Facilities Policy 1.11 and Sections 21.38.020, 21.38.030 and 21.44.010 of the Zoning Code.

Requirement: The need and desire for these public facilities has been determined by public input to the City Council and by a community attitude survey conducted in June and July 1988 and documented in Appendix C of the 1988 General Plan.

#### 2. Sites

The Highway 111 Public Facility Overlay Zone for the City of Indian Wells is indicated in Figure 7, and consists of 7 sites:

- Site 1. Grove Gate North
- Site 2. Grove Gate South
- Site 3A. Community Center Landscape
- Site 3B. Community Center/Public Library
- Site 4. Grove Preserve
- Site 5. Grove Remnant
- Site 6. Fountain
- Site 7. Cahuilla Interpretive Center, alone or as part of a Cahuilla National Monument

The seven sites are shown in the context of the City in Figure 8, Design Principles, and View Diagram, Figure 9.



### 3. Regulations.

Regulation: All development within the Zone shall be subject to the review and approval by the Architectural and Landscape Committee (ALC), as provided in Chapter 21.60.

- (a) The following Priority I, II and III classifications are established for development of PFO sites:
  - (1) Priority I: Priority I uses in the locations indicated are required for implementation of the PFO Zone and Highway 111 Specific Plan;
  - (2) Priority II: Priority II Preferred Uses are highly recommended for the locations indicated in order to augment and extend the Public Facilities provided by existing and Priority I facilities;
  - (3) Priority III: Priority III Preferred Uses are recommended for the locations indicated in order to 1) augment and extend the Public Facilities provided by existing, Priority I and Priority II facilities, and 2) to provide alternative sites for Priority II facilities, if required.
- (b) Priority I: Uses in these sites shall be permitted only as follows:
  - Site 1. Grove Gate North
  - Site 2. Grove Gate South
  - Site 3A. Community Center Landscape
  - Site 3B. Community Center/Public Library or Priority II Preferred Use
  - Site 6. Fountain
  - Site 7. Cahuilla Interpretive Center, alone or as part of a future Cahuilla National Monument
- (c) Priority II: Uses in these sites shall be permitted only as follows:
  - (1) Preferred:
    - Site 4. Grove Preserve
  - (2) Permitted if no Preferred Use is feasible:
    - a. Additional Uses Similar and Compatible to the types of uses proposed for Priority II; or
    - b. Uses otherwise consistent with General Plan Land Use Policy.





- (d) Priority III: Uses in these sites shall be permitted only as follows:
  - (1) Preferred:
    - a. Site 5. Grove Remnant: the existing Date Grove shall remain.
  - (2) Permitted if no Preferred Use is feasible:
    - a. Additional Uses similar and compatible to the types of uses proposed for Priority II or III; and
    - b. Uses otherwise consistent with General Plan Land Use Policy.

#### **4. Guidelines: Development Standards.**

##### **(a) Site 1,2. GROVE GATE NORTH AND GROVE GATE SOUTH**

The Grove Gate is the main entrance to the City of Indian Wells from the west. It identifies the city as a special place in the desert and recalls a part of its history. The motorist actually drives through the overarching trees of a date palm grove that recreates a dense, cool environment suggesting the character of the city as an oasis. It recalls the history of the City as a major date production area from 1900-1960, and actually incorporates portions of the historic Cook family date grove south of Highway 111. Other trees from the grove will be planted to the north side of the highway to complete the gate. Grove Gates North and South each include a still, reflecting pond-type water feature, which recalls the flooding-irrigation historically used in producing date groves.

##### **(b) Site 3A. COMMUNITY CENTER LANDSCAPE**

Site 3A consists of a wedge of land at the southwest corner of Eldorado Drive and Highway 111. The site will be landscaped with a desert-like plant palette, in a manner to complement the landscape of the community facilities on site 3B.

##### **(c) Site 3B. COMMUNITY CENTER/LIBRARY**

Across from the existing City Hall Complex, the Community Center will be the heart of the City of Indian Wells, providing a civic focus with community meeting rooms, senior citizens activity facilities, a small auditorium and public library. The low scale buildings will be placed east of Eldorado Drive set back on the south side of Highway



III. An appropriate architecture of deep arcades, planar walls, tile roofs, landscaped courtyards and a desert palette will unite the buildings with the landscape. Native plant materials will be incorporated into a landscape plan that recalls the desert environment and reinforces views of Mt. Eisenhower to the south.

(d) Site 4. GROVE PRESERVE

The only existing city park includes a small historic palm grove fronting the north side of Highway 111 at City Hall. Preservation of the existing date palms on the site immediately to the east will be encouraged.

(e) Site 5. GROVE REMNANT

The Grove Remnant located between Eldorado Drive and Indian Wells Lane on Highway 111 will incorporate a 300 foot setback of existing date palm trees, formerly part of a historic palm grove.

(f) Site 6. FOUNTAIN

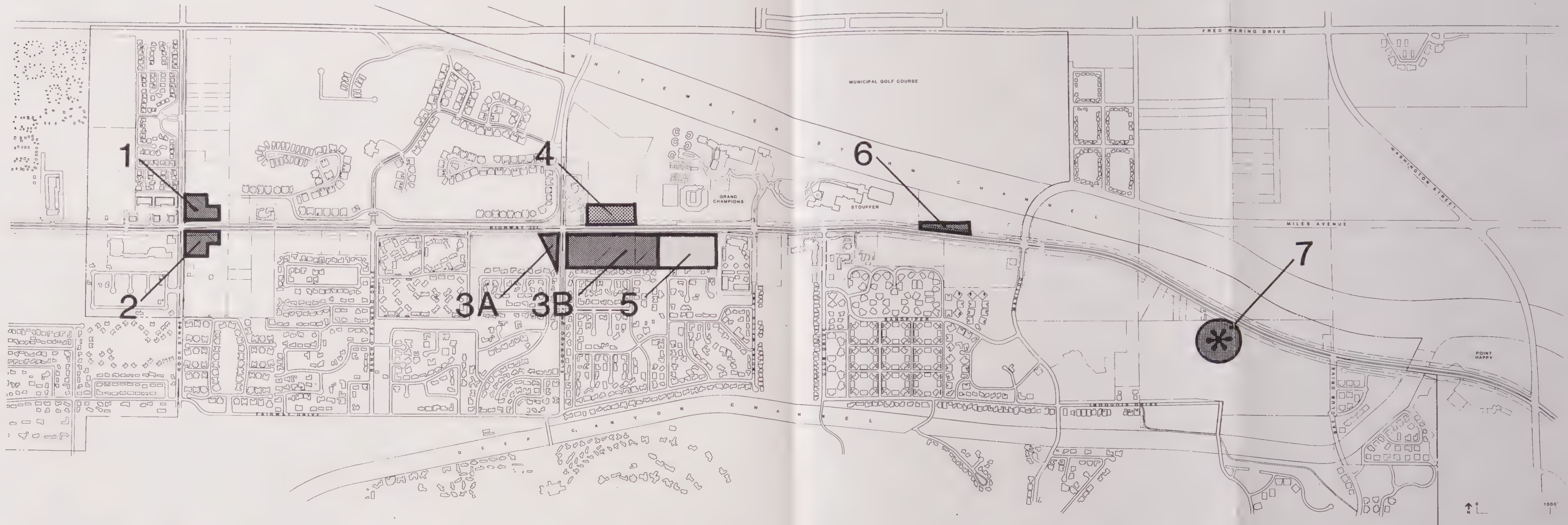
The Fountain is symbolic of an oasis and recalls the history of Indian Wells as the site of one of the few reliable wells in the desert. The Cahuilla Indians were unique among North American Indians for their hand dug wells. A major indian well, later used as a government well, was located just east of the oasis fountain. The fountain terminates the axis of Highway 111 and marks the transition from a lush landscaped environment to the desert-related landscape theme. The fountain will be constructed as a component of the residential project on this site.

(g) Site 7. CAHUILLA INTERPRETIVE CENTER




The Cahuilla Interpretive Center will be located in the Desert Links Golf Course. It will focus on the excavated and restored Cahuilla Indian Well existing on the site. Interpretive exhibits will tell the story of the unique hand-dug wells and their role in the history of the Coachella Valley. The Center will include re-created full-scale models of Cahuilla buildings including houses, a ceremonial building and granary. The Well may qualify as a National Historic Monument and be eligible for the National Register of Historic Monuments. The Interpretive Center will be landscaped with native plant materials; interpretive exhibits will explain their use for foods, medicines and building materials.







# KEY

-  PRIORITY I
-  PRIORITY II
-  PRIORITY III

- 1 GROVE GATE NORTH
- 2 GROVE GATE SOUTH
- 3A COMMUNITY CENTER LANDSCAPE
- 3B COMMUNITY CENTER/PUBLIC LIBRARY
- 4 GROVE PRESERVE
- 5 GROVE REMNANT
- 6 FOUNTAIN
- 7 CAHUILLA INTERPRETIVE CENTER OR CAHUILLA NATIONAL MONUMENT

FIG. 7

## PUBLIC FACILITIES OVERLAY





## KEY

- 1 PALM DESERT STRIP COMMERCIAL
- 2 MINI-GROVE GATE
- 3 ENTRY MONUMENT
- 4 PALM ALLEE
- 5 GROVE GATE
- 6 RESIDENTIAL NODE
- 7 FORMAL PALM EDGE
- 8 INFORMAL PLANTING EDGE
- 9 CIVIC NODE
- 10 EXISTING CITY HALL
- 11 COMMUNITY CENTER/LIBRARY
- 12 GROVE REMNANT
- 13 RESORT COMMERCIAL NODE
- 14 FOUNTAIN
- 15 WIND ROW PLANTING
- 16 DESERT EDGE PLANTING
- 17 CAHUILLA INTERPRETIVE CENTER
- 18 POINT HAPPY NATURAL ROCK GATE
- 19 LA QUINTA STRIP COMMERCIAL
- 20 MT. EISENHOWER

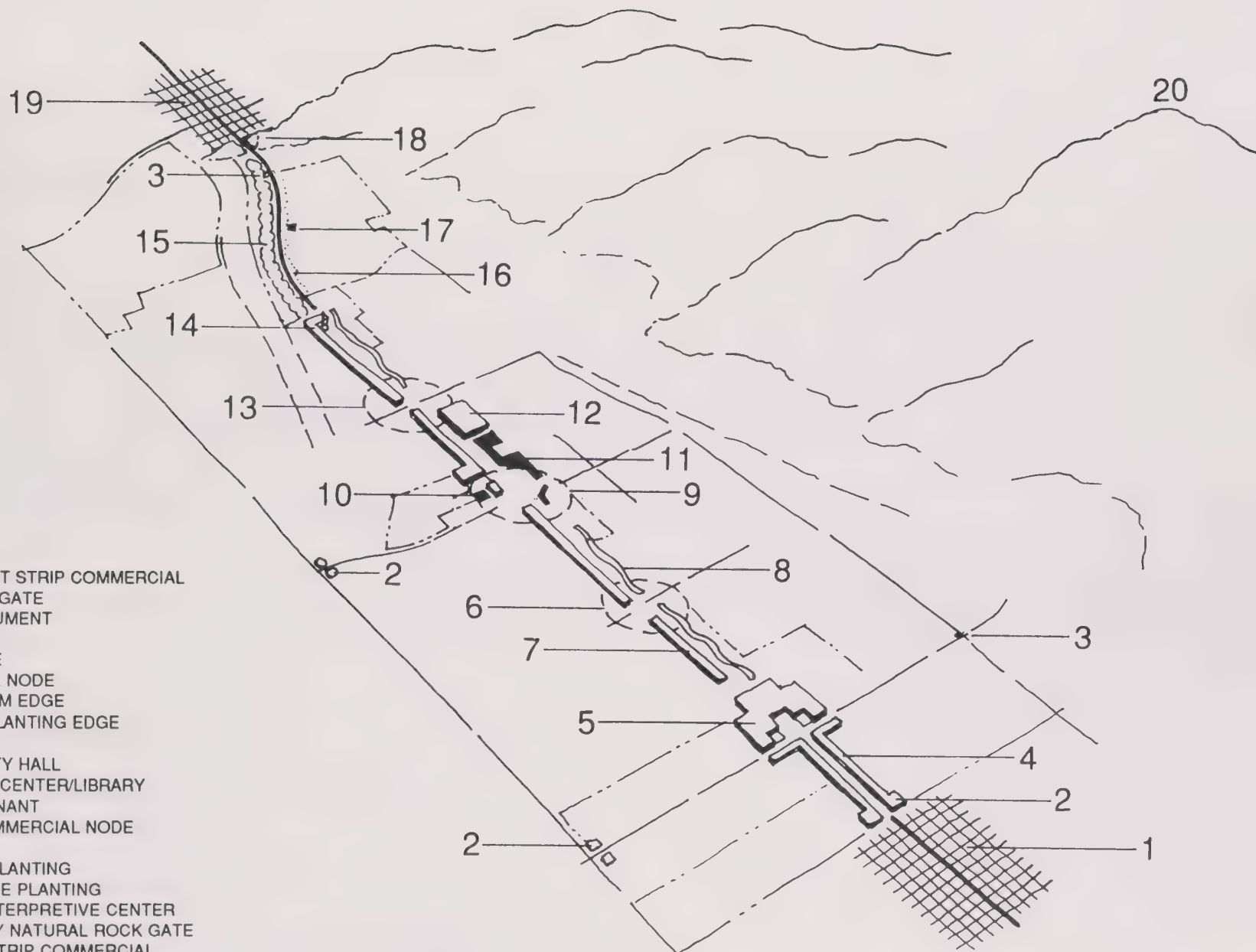
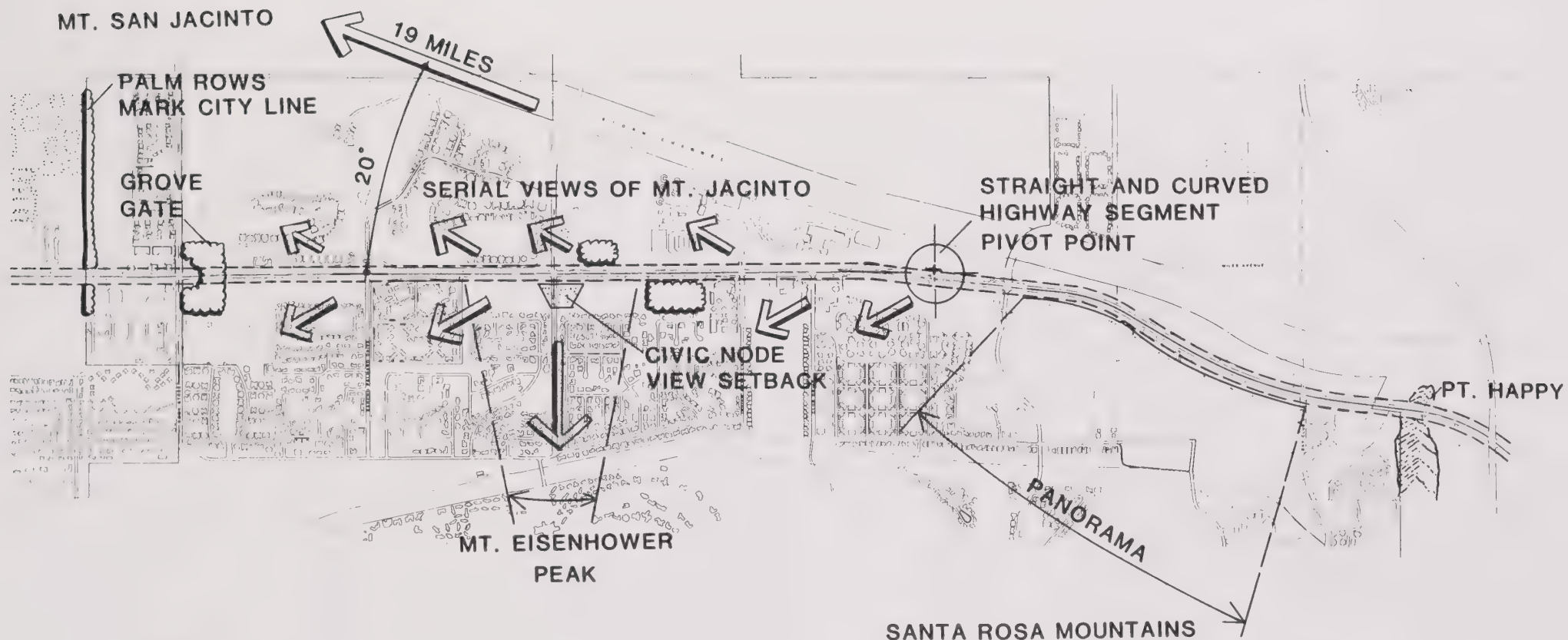


FIG. 8

## DESIGN PRINCIPLES





#### KEY






-  220' HIGHWAY 111 CORRIDOR
-  VIEWS / VISTAS
-  PALM GROVES
-  MAJOR VIEW CORRIDOR SETBACK
-  VIEW CORRIDOR

FIG. 9

## VIEW DIAGRAM





## **SECTION 21.45.030**

### **HIGHWAY 111 LANDSCAPE TYPES**

#### **1. Concept.**

Purpose: The purposes of the Highway 111 Landscape Types are to 1) establish a distinctive, themed landscape area for the length of the Highway, 2) maintain the palm and desert-themed landscape of existing developments, and 3) create a visual and sound buffer from the Highway for adjacent uses.

#### **2. Landscape Setback Areas: Location.**

Location: The Highway 111 Landscape Setback Area is shown in Figure 10, and generally extends 55 feet from existing curb, that is, 94 feet (west of Miles Avenue) to 98 feet (east of Miles Avenue) from the centerline of Highway 111.

#### **3. Regulations:**

- (a) The Highway 111 Landscape Setback Area is divided into 8 Landscape Types. Each fronting Lot or Parcel shall be landscaped to be compatible and consistent with the landscape character for its appropriate Type, as illustrated in Figures 11a through 11l. Each Type shall in addition be compatible with, and extend any continuous features of its adjacent Types, as for example in the case of paths and walkways.
- (b) Review and Land Uses: All development within the Highway 111 Landscape Setback Area shall be subject to the review and approval by the City Council and the Architectural and Landscape Committee (ALC); the uses permitted in the Landscape Setback Area shall be limited to the following:
  - (1) Public Facilities.
  - (2) Signs (public or quasi-public only).
  - (3) Landscape, including hardscape, plant materials, street furniture and walls six feet in height from adjacent Highway side finished grade.
  - (4) Public Utilities.



- (c) Encroachment:
  - (1) The Landscape Setback Area shall constitute a mandatory building setback; upon demonstration of undue hardship to the satisfaction of the City Planning Commission, development may be permitted to encroach into the Landscape Setback Area to a distance not to exceed 10 feet.
  - (2) Planting in adjacent private areas shall not be permitted to grow on top of, or on the Highway side of any Sound/Buffer Wall; see 21.45.030 3(e) below.
- (d) Development Density: Any property subject to the requirements of the Landscape Setback Area may be permitted to be developed to the density which would have been permitted in the absence of the Landscape Setback Area, by means of a Conditional Use Permit or project Specific Plan.
- (e) Residential Sound/Buffer Walls located 1) at the Landscape Setback Line, or 2) within six feet of the Landscape Setback Line, or 3) within 8 feet of the Landscape Setback Line in the case of an approved encroachment shall comply with the following:
  - (1) Continuous sound/buffer walls shall be located within the Highway 111 Landscape Setback area at the outer boundary line except as provided below for all residential development.
  - (2) Walls shall be continuous, solid, stuccoed masonry or concrete, on top of a landscaped berm, and aligned roughly parallel to Highway 111.
  - (3) Wall height shall be six feet from the top of berm on the Highway side; berms shall be three feet in height, measured from adjacent finished grade, on the Highway side. See Figure 11a.
  - (4) Walls shall be colored white, either painted or surfaced with integral-color stucco; if stucco is employed, it shall be applied thick enough to conceal all masonry joint lines.



- (5) The wall plane shall be articulated along its length by staggering of the wall plane by means of perpendicular sections, not less than two feet from adjacent sections; such change of plane shall occur at intervals between 50 and 100 feet, subject to approval by the ALC. Maximum cumulative stagger of the wall plane shall not exceed six feet, unless encroachment is permitted under 21.45.030 3(c) above. When staggering a Sound/Buffer wall, the area inside the Setback line (within the Landscape Setback Area) shall have be equal to an area outside the Landscape Setback Line for a given development, as illustrated in Figure 11a.
- (6) Wall design shall be approved by the ALC.
- (7) Wall/berm design shall be reviewed by a licensed acoustical engineer who shall certify to the satisfaction of the City Engineer that the proposed design is adequate to provide a residential rear-yard noise level not in excess of 65 CNEL, or other appropriate standard.

(f) Other Buffer Walls in the Specific Plan Area:

- (1) Walls between Public Areas and residential areas, between Commercial Areas and residential areas, and between Public Areas and Resort Commercial shall be six feet in height, and shall comply with the following:
  - (a) Walls shall be continuous, solid, stuccoed masonry or concrete, and aligned roughly parallel and perpendicular to Highway 111.
  - (b) Walls shall be colored white, either painted or surfaced with integral-color stucco; if stucco is employed, it shall be applied thick enough to conceal all masonry joint lines.
  - (c) Wall design shall be approved by the ALC.
- (2) Designs of front yard screen walls in commercial and resort commercial zones shall be approved by the ALC; screen walls for parking shall be continuous, solid, white stuccoed masonry or concrete, not less than three feet in height.





#### **4. Landscape Types: Design Guidelines**

- (a) Type 1. West Entry: The West Entry consists of a mini-grove of palms, on either side of Highway 111, leading to a palm allee. The allee consists of a staggered double row of palms, set back from the highway, to give a broad vista to the easterly approach to the formality of the Grove Gate. In the westerly direction, the allee functions as a transition from the Grove Gate to the City border. A grassed median and two to three-foot berms along the Highway edge, buffer adjacent parking areas of this commercial area. See Figure 11b.
- (b) Type 2. Grove Gate: The Grove Gate is located at the northeast and southeast corners of Highway 111 at Cook Street. Two reflecting pools mirror the sky at the westerly edges; proceeding further east, the palm-grove steps inward. Near the outer north and south perimeter, the Grove is differentiated by inclusion of citrus trees interspersed with date palms as an "understory", resulting in full visual enclosure of the Grove Gate. Recalling the agricultural history of the city, the ground plane within the Grove is cleared earth without planting, as found in producing groves and orchards. A 100 foot turfed parkway marks the transition from the Grove Gate to Highway landscape consisting of a formal triple row of date palms on the north, and informal groupings of shade trees and an occasional palm, on the south. The Highway median will also include a double row date palms to mirror the grove to either side. See Figures 11c through 11e.
- (c) Type 3. Residential: In the Residential area, the north side of the Highway is formal in character and the south side is informal, reflecting both the size and organization of adjacent land uses. The north side features a triple row of date palms. On the south, palm clusters are interspersed with groupings of canopy trees; the ground plane on both sides of the Highway and including the median, is grassed. Annual flowers may be planted on either side of the Highway. The south side ground plane also features a combination of berms and sound attenuation walls to buffer adjacent residences. See Figure 11f.
- (d) Type 4. Civic: The Civic area is characterized by palm groves to the north of the Highway and by a combination of buildings, "desert remnant" and focussed view corridor to Mount Eisenhower on the south. The desert remnant consists of a small desert-scape on the southwest corner of Eldorado Drive and a larger desert-scape on the southeast corner; the latter includes an earthform which results in a forced perspective and the visual illusion of an expansive space. Public facilities are located on the southeast corner, consisting of a library, small auditorium, meeting rooms and a multi-purpose center. The Highway median will be planted with desert type flowering ground cover. An intersection medallion incorporating the city shield or similar thematic treatment, such as a Cahuilla geometric pattern, is planned for the intersection of Highway 111 and Eldorado Drive. See Figures 11g and 11h.



- (e) Type 5. Resort: In the Resort area, landscaping to the north consists of triple palms; to the south, the character is informal, as in Residential Type 3. A low berm or wall on the south is used to buffer adjacent parking from view; on the north an articulated wall has alternating solid and view sections. The ground plane consists of turf, mown short to reflect the manicured golf courses of the resorts. At the corner of Indian Wells Lane, there will be water features on all four corners. The existing features of the Grand Champions/Stouffer resorts will be mirrored by smaller features on the southerly corners, adjacent to the Erewan Hotel and a future resort use. The Highway median will be grassed. See Figure 11i.
- (f) Type 6. Resort/Residential: The north side of the Highway is landscaped with triple palms as in the adjacent Resort Type 5. On the south, the landscape character includes informal palm and canopy tree clusters, berms and sound attenuating walls, as in the Residential Type 3. The Highway median will be grassed. See figure 11j.
- (g) Type 7. Transition: On the north side of the Highway, triple palm rows terminate at the Fountain feature at the multi-family housing development. On the south, the Residential landscape character of Type 6 becomes more sparsely treed. The turfed ground plane gives way to desert ground cover and sandy earth forms. The Highway median will be landscaped with a combination of desert type plants and ground cover. See Figure 11k.
- (h) Type 8. Desert: The Desert Type preserves the landscape character which preceded development of the Coachella Valley. On the north, massed, untrimmed canopy trees, provide a wind/blowsand barrier, and visually buffer adjacent multi-family housing from view. On the south, the setback area is landscaped with sandy berms and an enhanced Sonoran desert palette of native species, reminiscent of dunes and of the low foothills of the nearby Santa Rosa Mountains. In this area, foreground, background and sky are visually united in a composition of the essential elements of the desert environment. Midway in the area south of the Highway will be located the Cahuilla Interpretive Center and the restored Indian Well. The Highway median will be landscaped with a combination of desert type plants and ground cover, as in Transition Area, Type 7. See Figure 11l.

## **5. Landscape Planting Guidelines**

- (a) Plant Materials: All plant materials installed within the Landscape Setback Area shall be selected from the Approved Highway 111 Plant List (Appendix I) as appropriate for its Type; substitute materials may be permitted, subject to the review and approval of the ALC.
- (b) Irrigation: All plant materials requiring irrigation shall be irrigated by means of surface or subsurface drip systems.



## **6. Street Furnishings Guidelines.**

All street furnishings including bus shelters shall be provided by the City, and may consist in addition of the following: trash receptacles, bollards, public or emergency telephones, drinking fountains, and the like. All street furniture shall be approved by the ALC and shall follow the guidelines contained in Subsection 9 below.

## **7. Lighting Guidelines.**

Lighting of the Landscape Setback Area shall in general be as subdued as possible, given requirements for safety. Lighting must avoid light spillage into private areas. Landscape lighting within the Landscape Setback Area shall consist of indirect, non-glare lights mounted on grade, positioned to light tree canopies, paths and walkways, or walls, as appropriate. For lighting within the Landscape Setback Area, tree-mounted lights are permitted. Except for highway intersections, pole-mounted lights are not permitted. Wherever possible metal halide lamps are recommended for their superior color rendition, from among the High Intensity Discharge lamps currently available.

## ~~8. Signage Guidelines.~~

~~No privately-owned or private-purpose signs of any kind shall be permitted within the Landscape Setback Area. Only on-grade and wall-mounted signs are permitted within private areas adjacent to the Landscape Setback Area; if lighted, front-lighting is preferred. All signs shall be fabricated from natural materials in subdued colors.~~

## **9. Material and Color Guidelines.**

All building materials used within the Landscape Setback Area shall consist mainly of durable, natural materials, such as concrete, colored and/or patterned concrete or pavers, tile and stone in muted natural or earth-tone colors.

## **10. Secondary Entry Feature Guidelines.**

- (a) Minigroves: In addition to the formal Grove Gate at Highway 111 and Cook Street, mini-groves may be located at the southeast and southwest corners of: Fred Waring Drive at Cook Street; and Fred Waring Drive at Eldorado Drive. Each mini-grove consists of an informal grouping of date palms as a back-drop, plus an externally-lighted ground-mounted monument sign in the foreground incorporating the City seal and a ground plane of flowering ground cover.



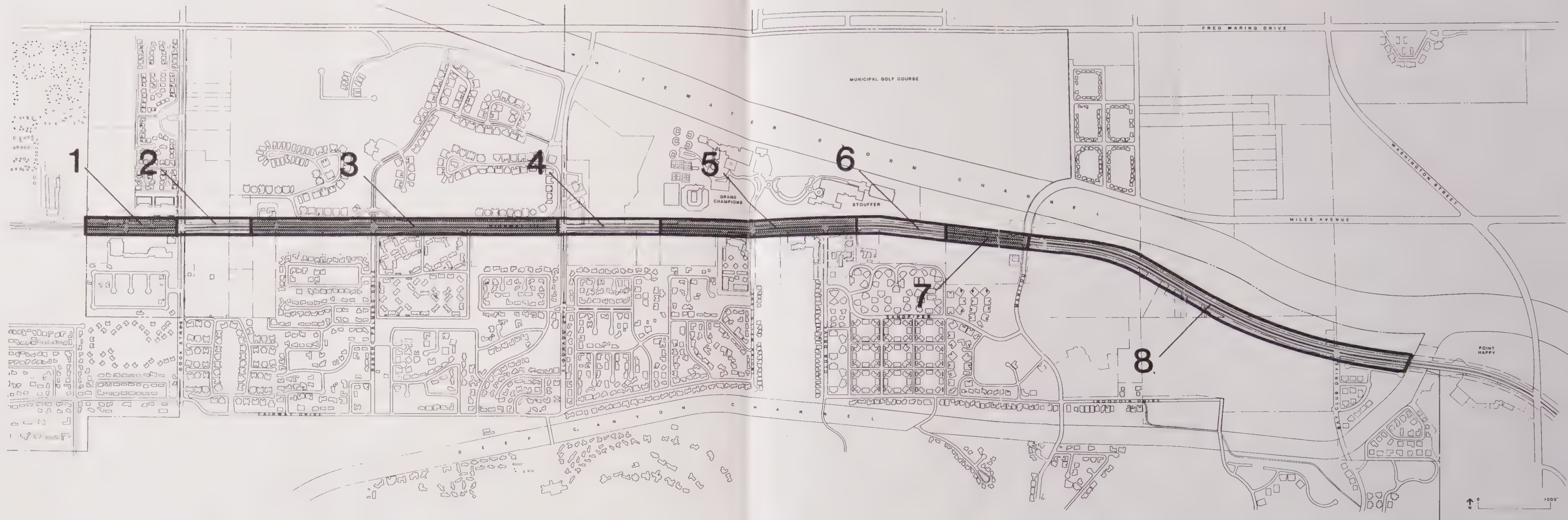




rev. 11/91

- (b) Entry Signs: Monument signs similar to those in 10(a) above may be placed on the north side of Highway 111 immediately west of the easterly city boundary, and on the northeast corner of Cook Street and Fairway Drive, and at such other locations as the city may direct.





1. WEST ENTRY
2. GROVE GATE
3. RESIDENTIAL
4. CIVIC
5. RESORT
6. RESORT/RESIDENTIAL
7. TRANSITION
8. DESERT

FIG. 10

## LANDSCAPE SETBACK TYPES



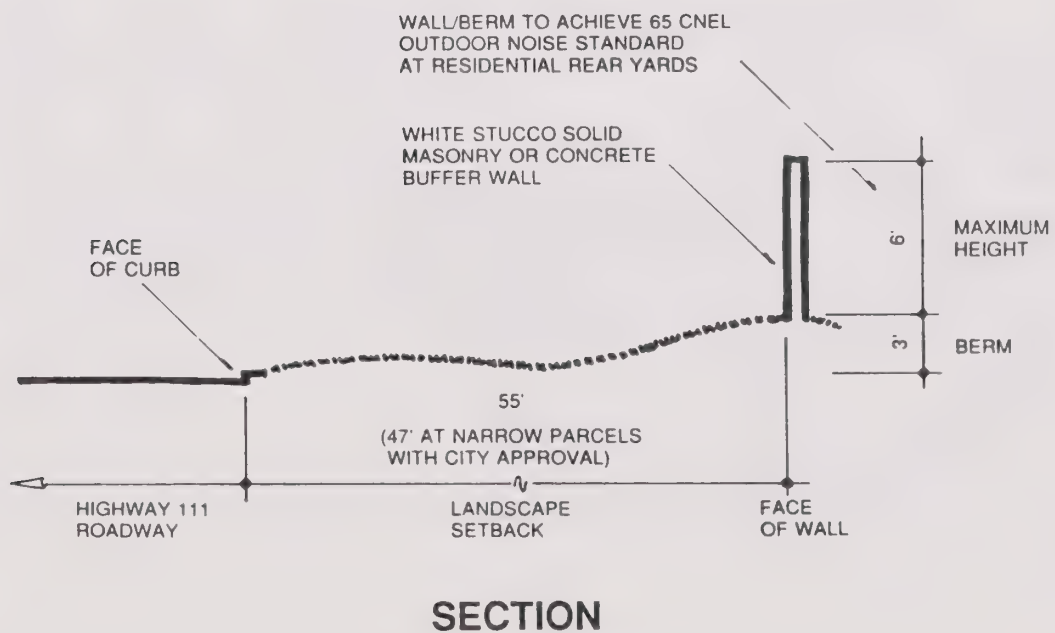
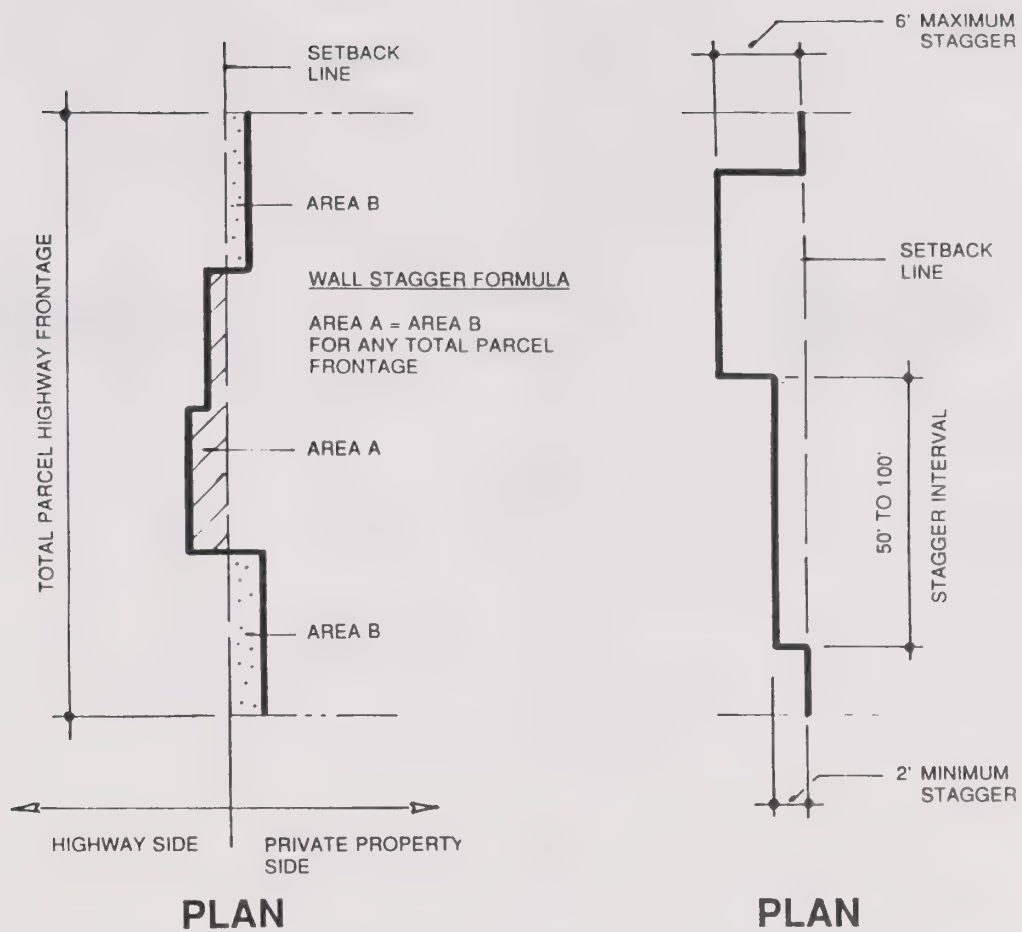


FIG. 11a

## RESIDENTIAL BUFFER WALL DIAGRAMS





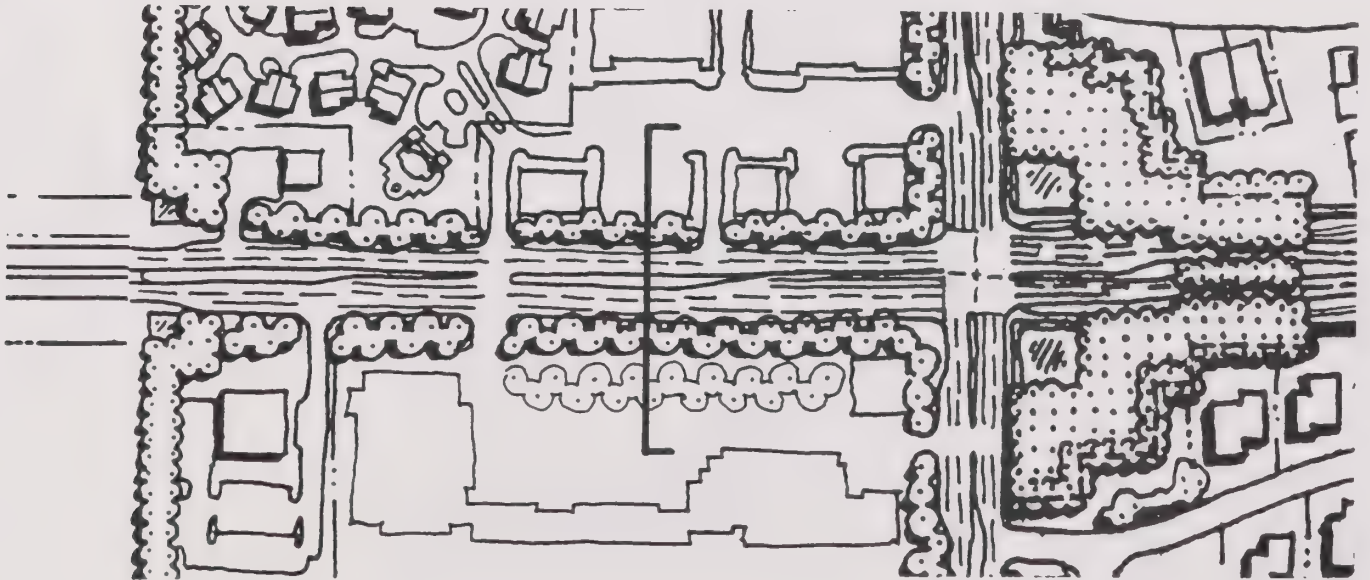
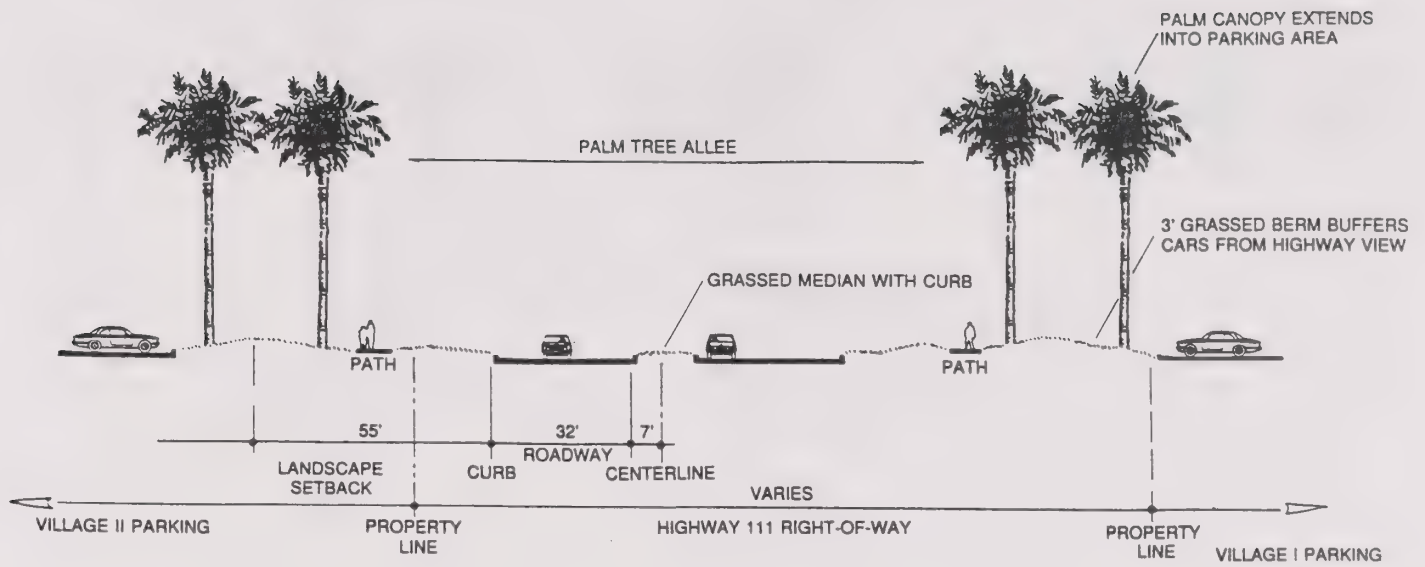


FIG. 11b

## WEST ENTRY - LANDSCAPE TYPE 1



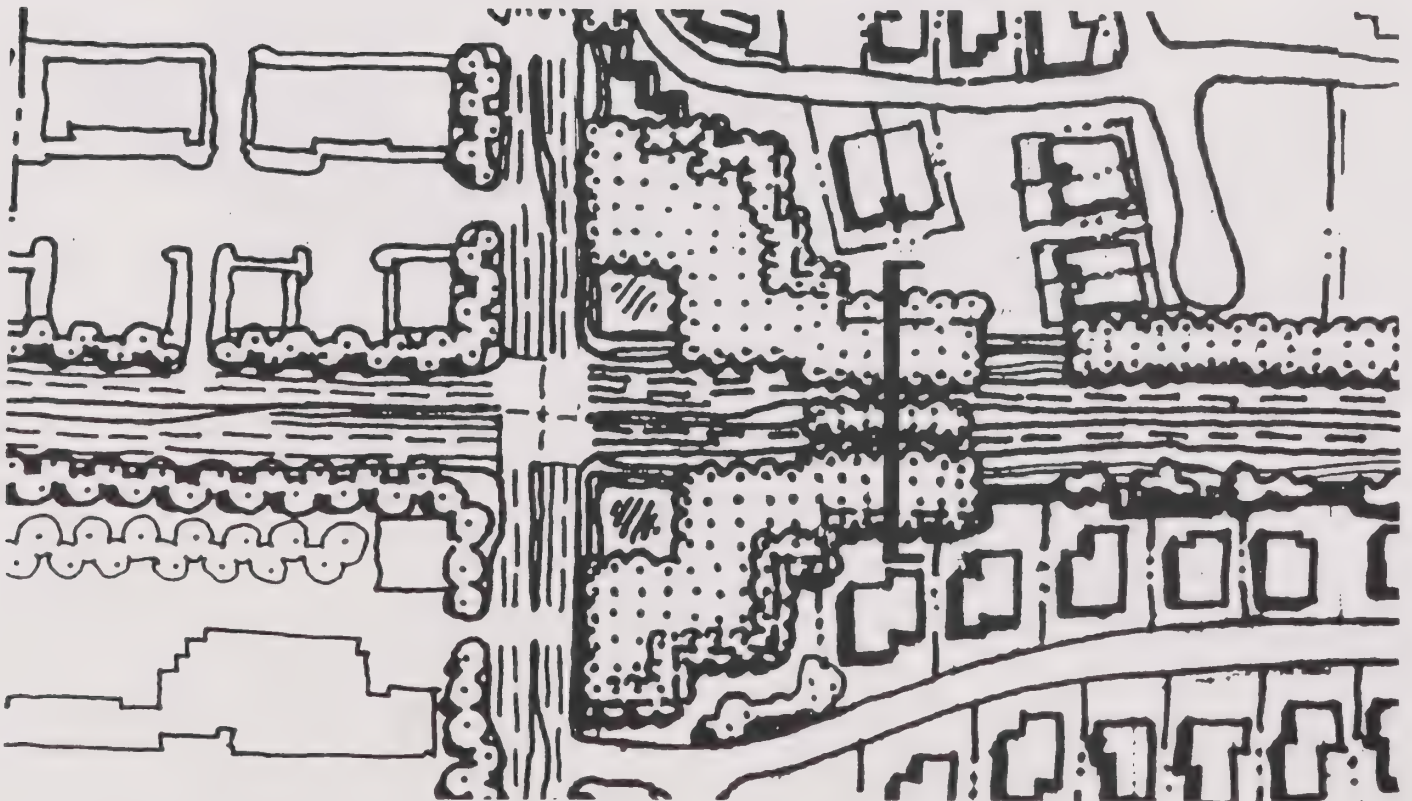
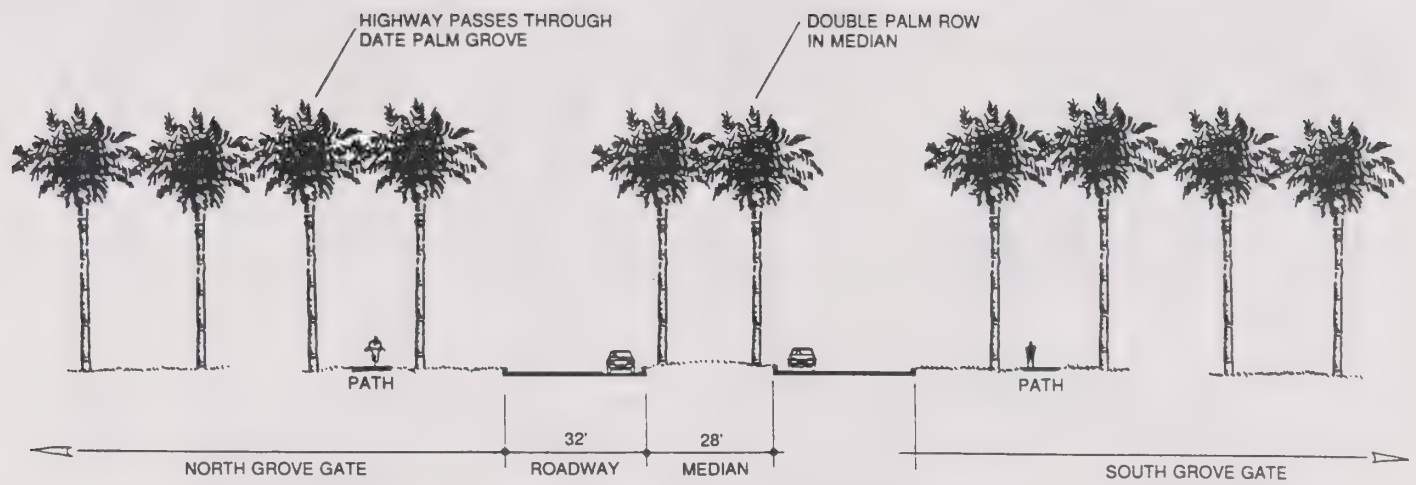
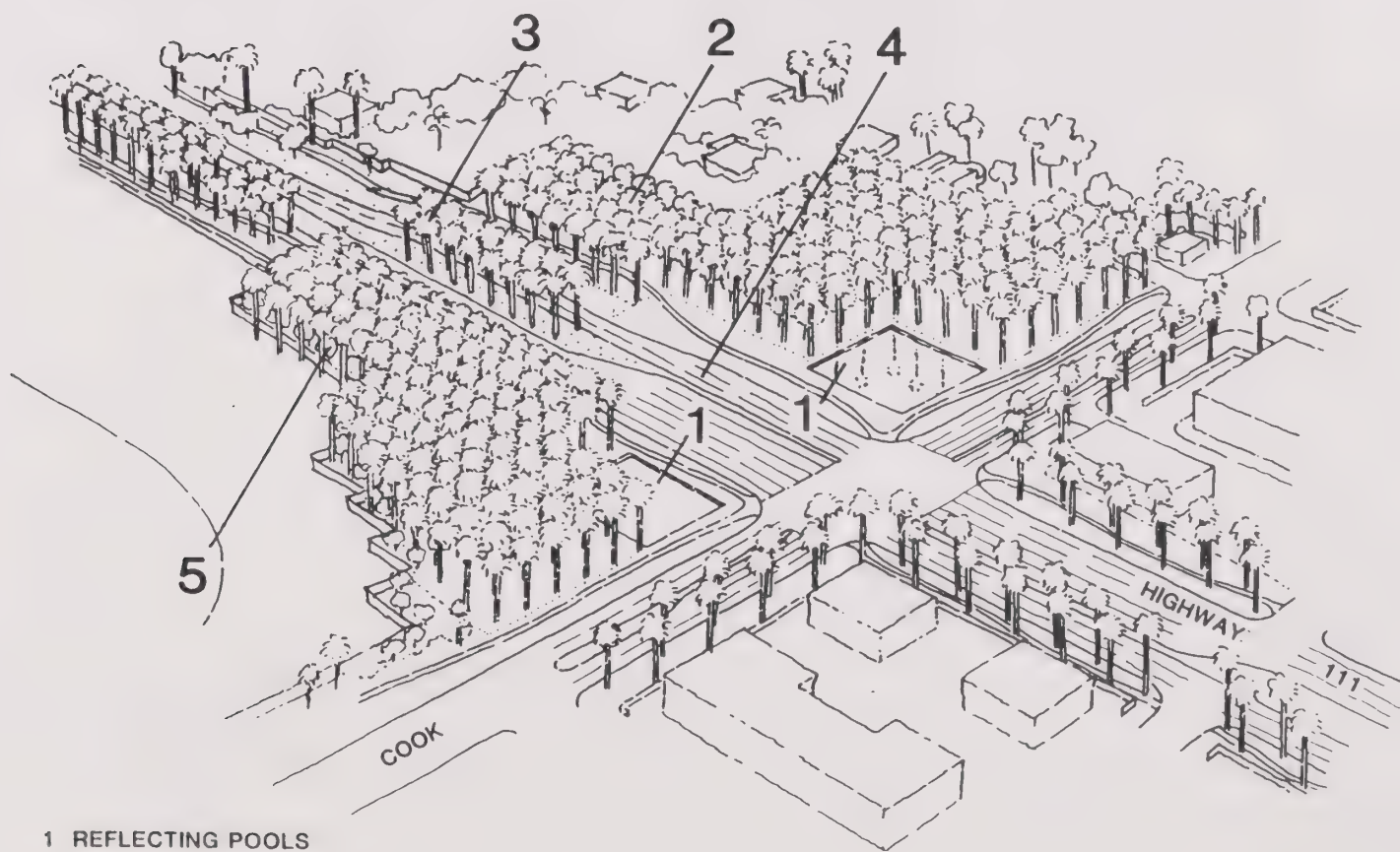


FIG. 11c

## GROVE GATE - LANDSCAPE TYPE 2







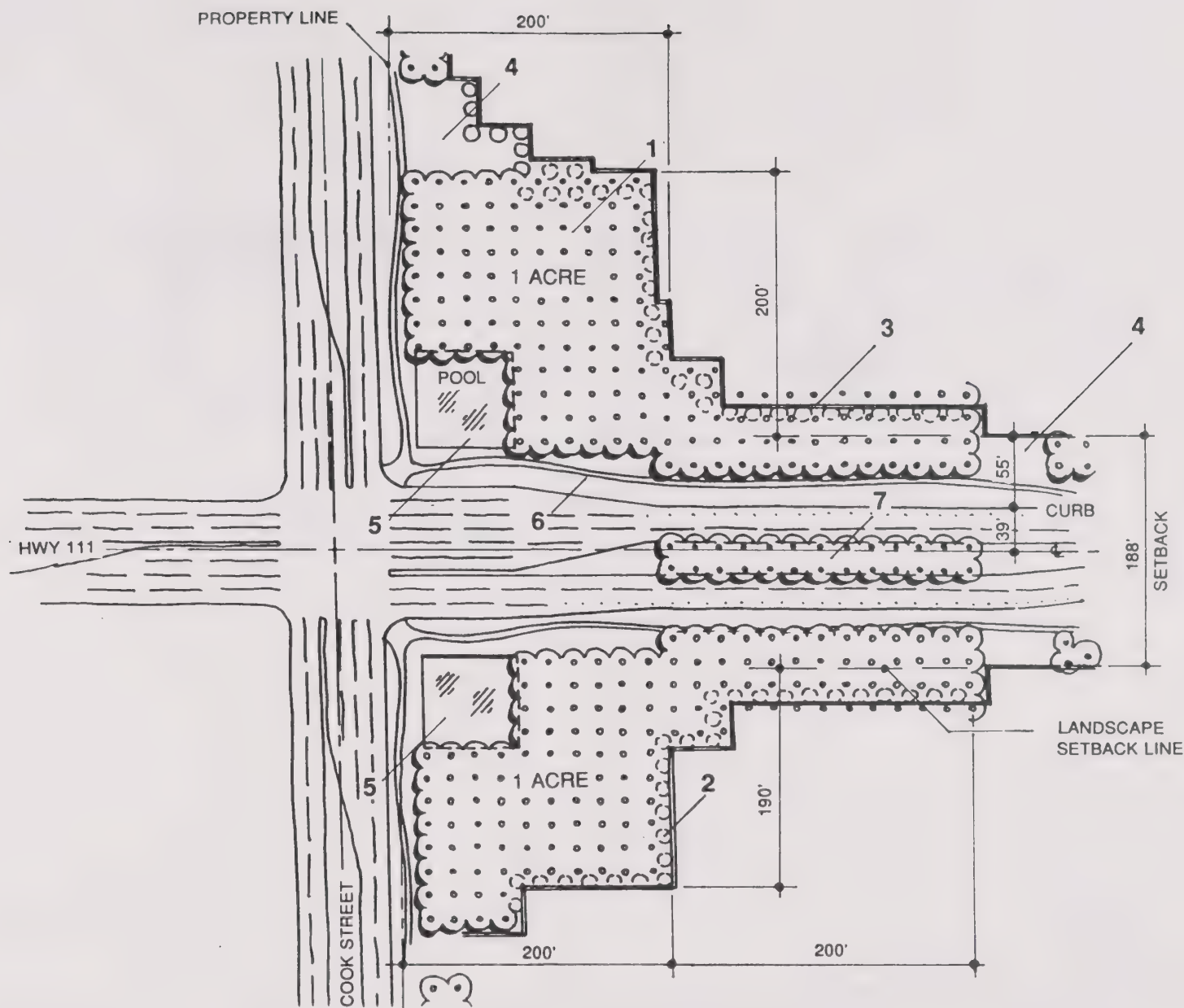
- 1 REFLECTING POOLS
- 2 DATE PALM GROVE
- 3 MEDIAN WITH PALMS
- 4 PALM GROVE STAGGERED SETBACK AT INTERSECTION
- 5 CITRUS UNDERSTORY AT OUTER EDGE

FIG. 11d

## GROVE GATE







## KEY

- 1 PALM GROVE (20' ON-CENTER TYPICAL TREE SPACING)
- 2 PERIMETER ROW OF UNDERSTORY CITRUS TREES
- 3 BUFFER WALL
- 4 100' BREAK IN ADJACENT PALM ROWS
- 5 REFLECTING POOL
- 6 BIKE PATHS
- 7 DOUBLE ROW OF PALMS IN MEDIAN

FIG. 11e

## GROVE GATE PLAN



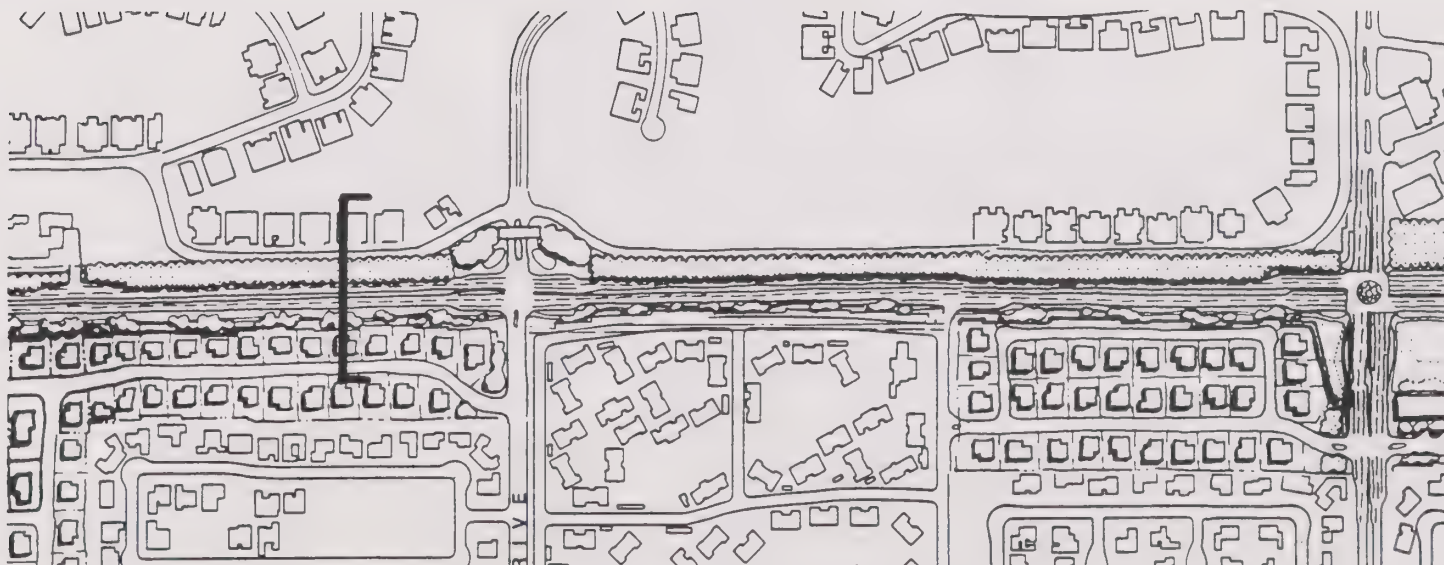
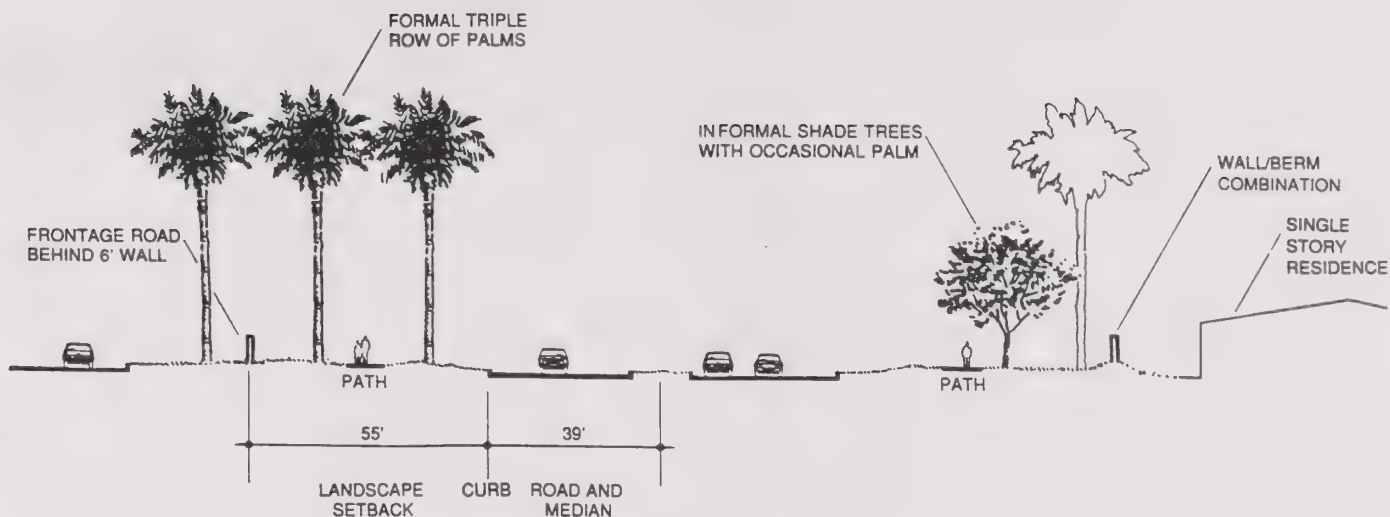


FIG. 11f

## RESIDENTIAL - LANDSCAPE TYPE 3





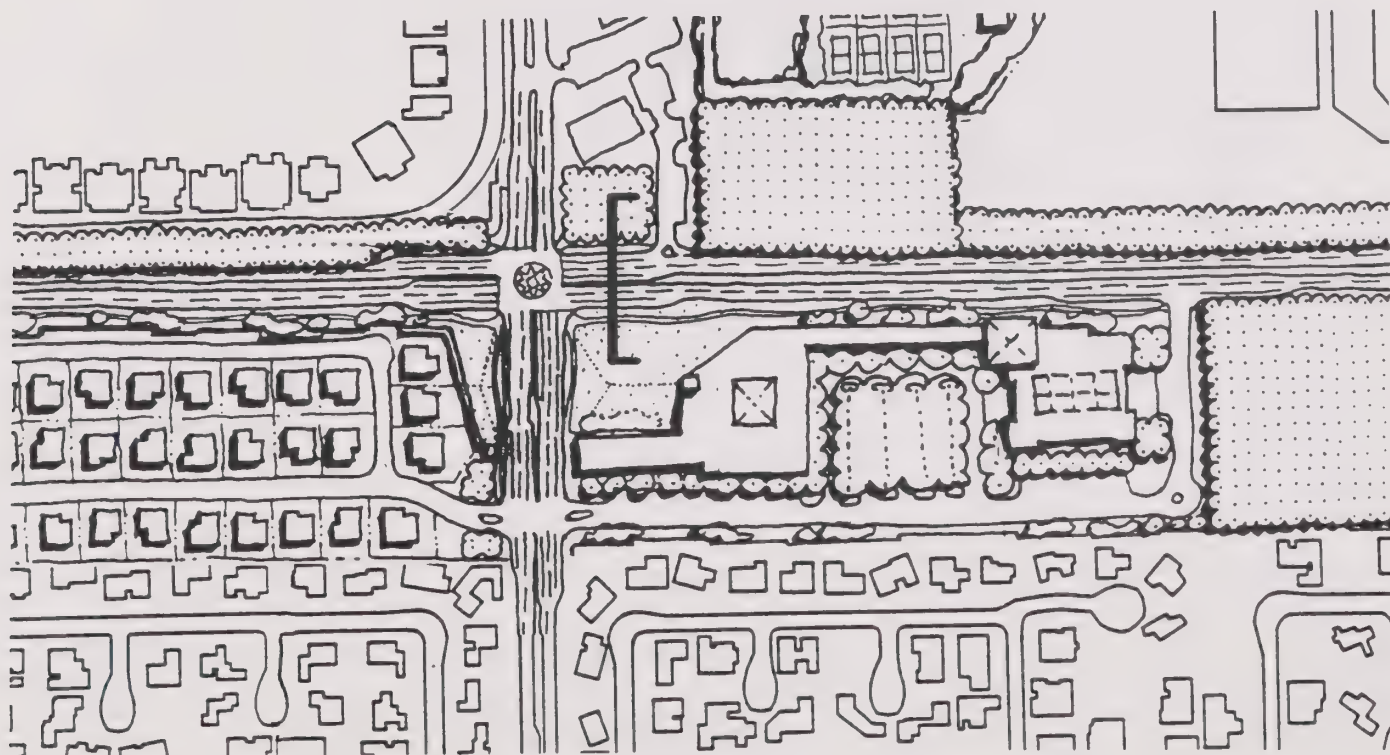
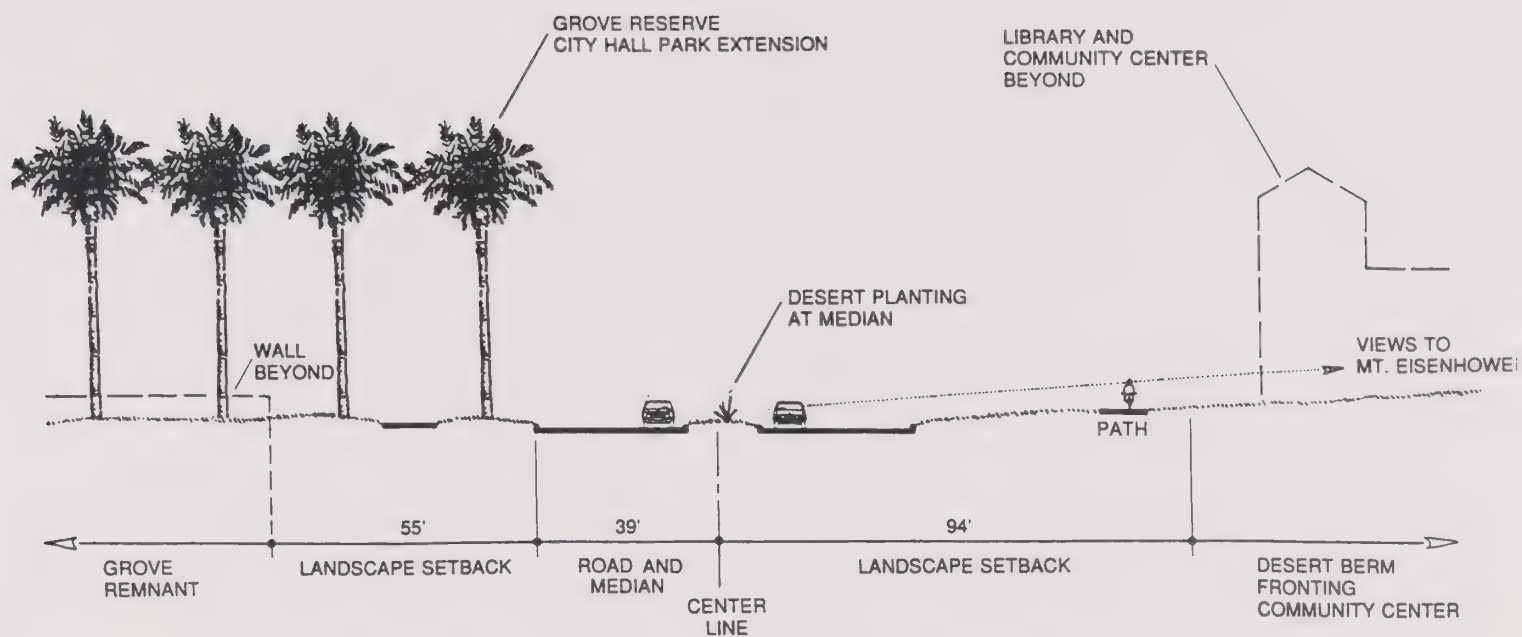
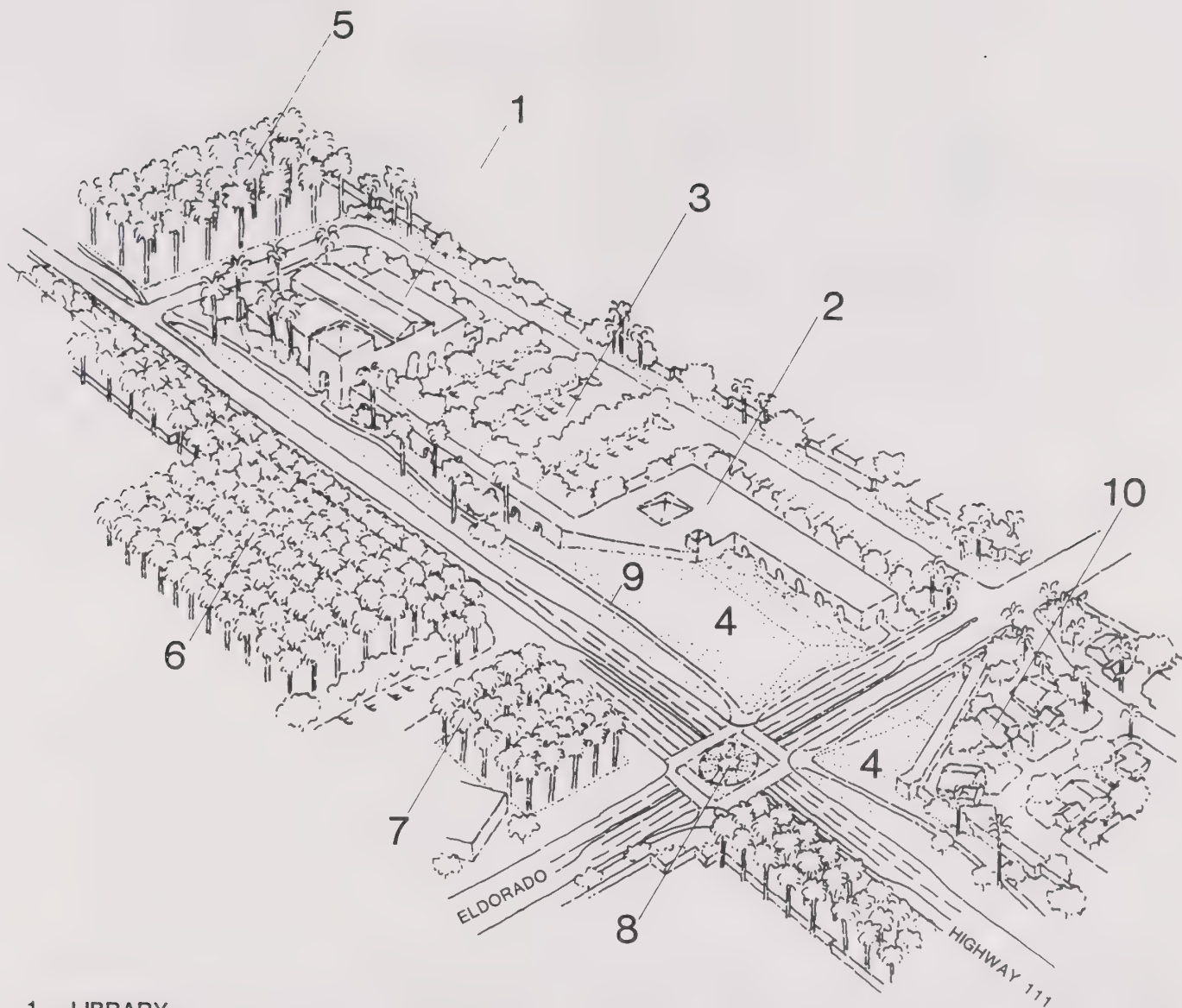


FIG. 11g

## CIVIC - LANDSCAPE TYPE 4





- 1 LIBRARY
- 2 COMMUNITY CENTER
- 3 PARKING COURT
- 4 DESERT BISM PRESERVES VIEW TO MT. EISENHOWER
- 5 GROVE REMNANT
- 6 CITY HALL PARK EXPANSION GROVE
- 7 EXISTING CITY HALL PARK
- 8 STREET MEDALLION AT IMPROVED INTERSECTION
- 9 BIKE PATH
- 10 HOUSING BEHIND LANDSCAPE SETBACK AND WALL

FIG. 11h

## CIVIC NODE



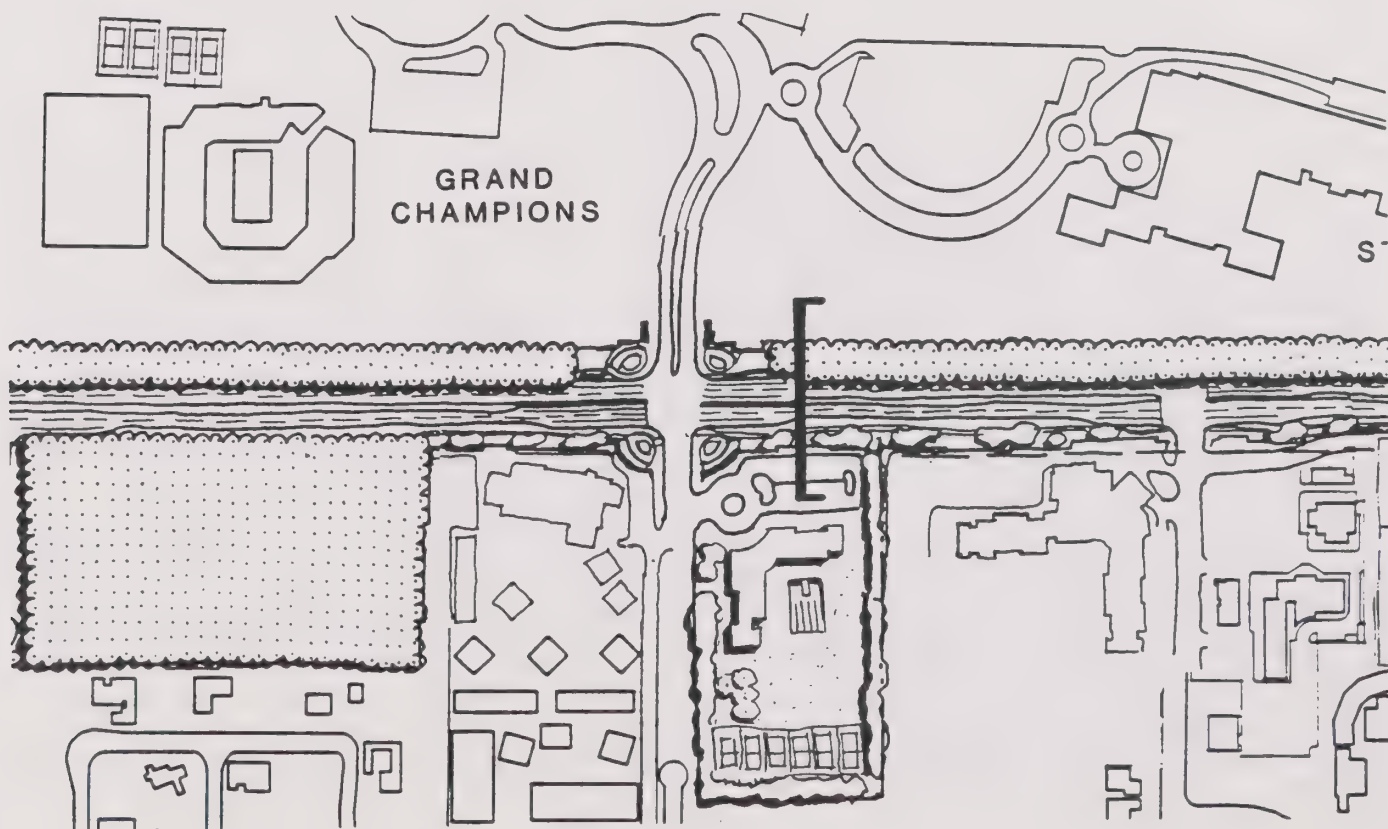
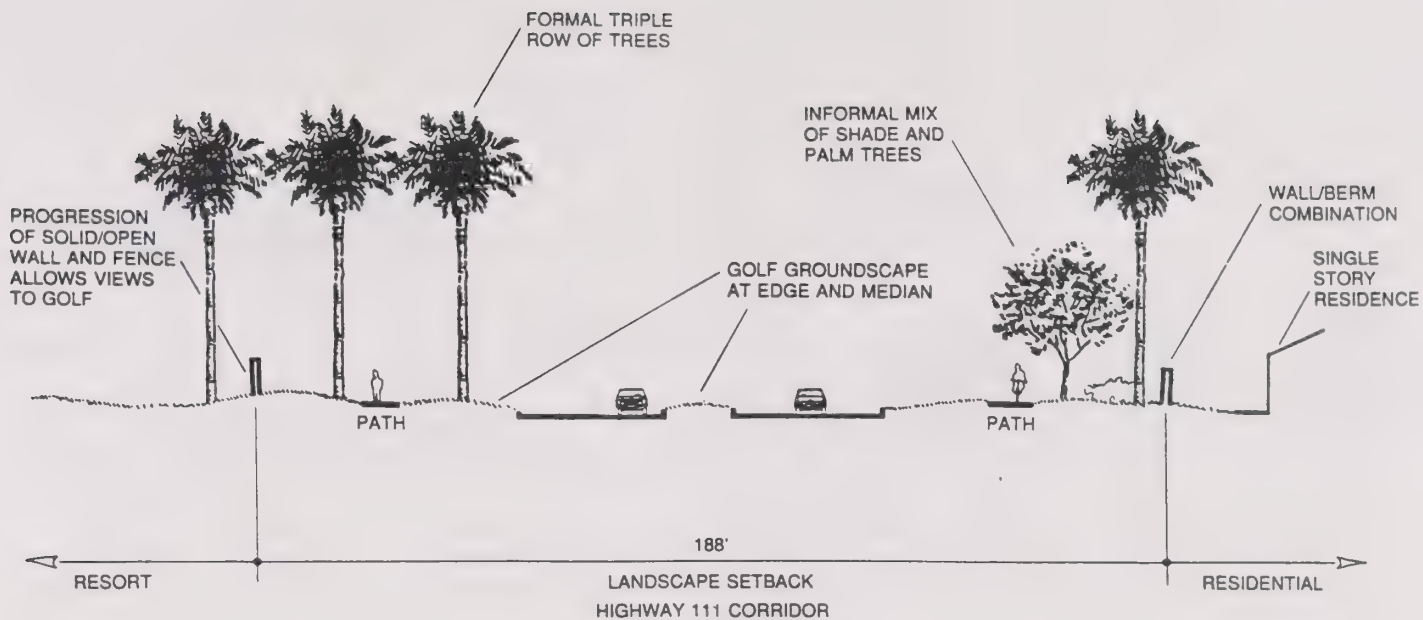


FIG. 11i

## RESORT - LANDSCAPE TYPE 5





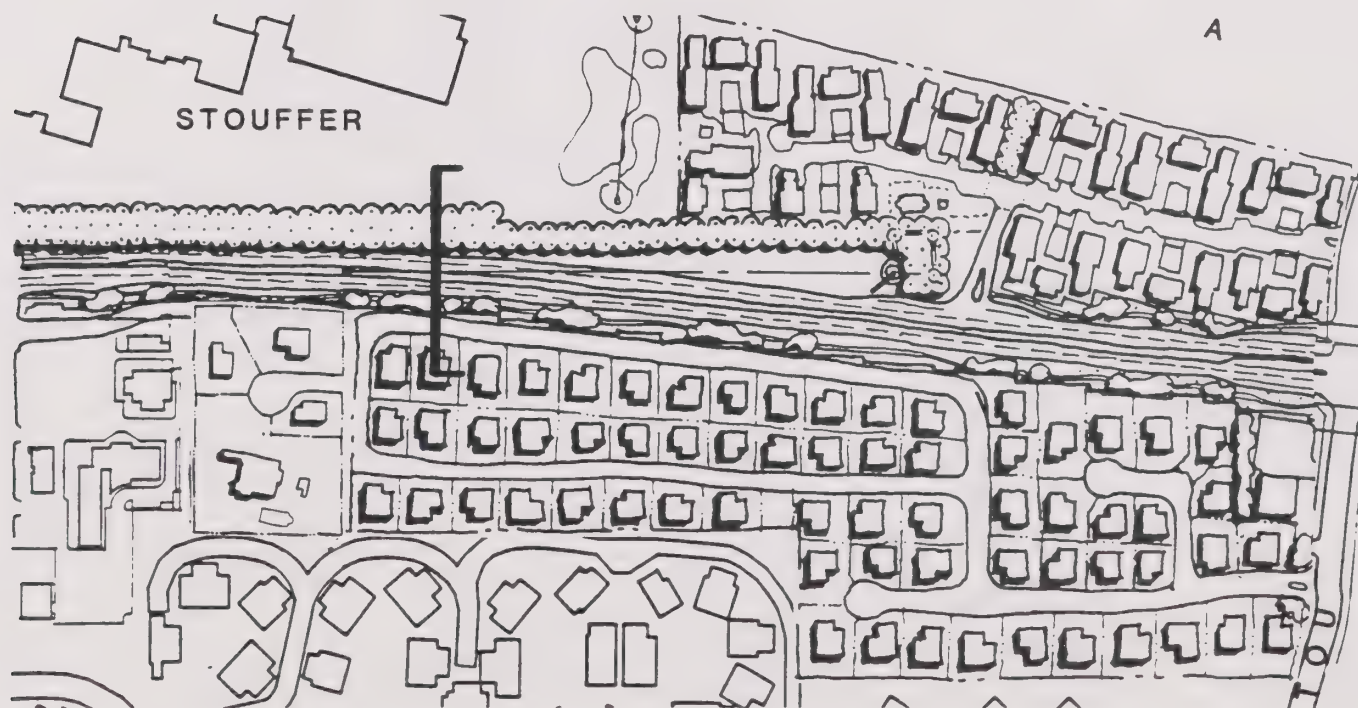
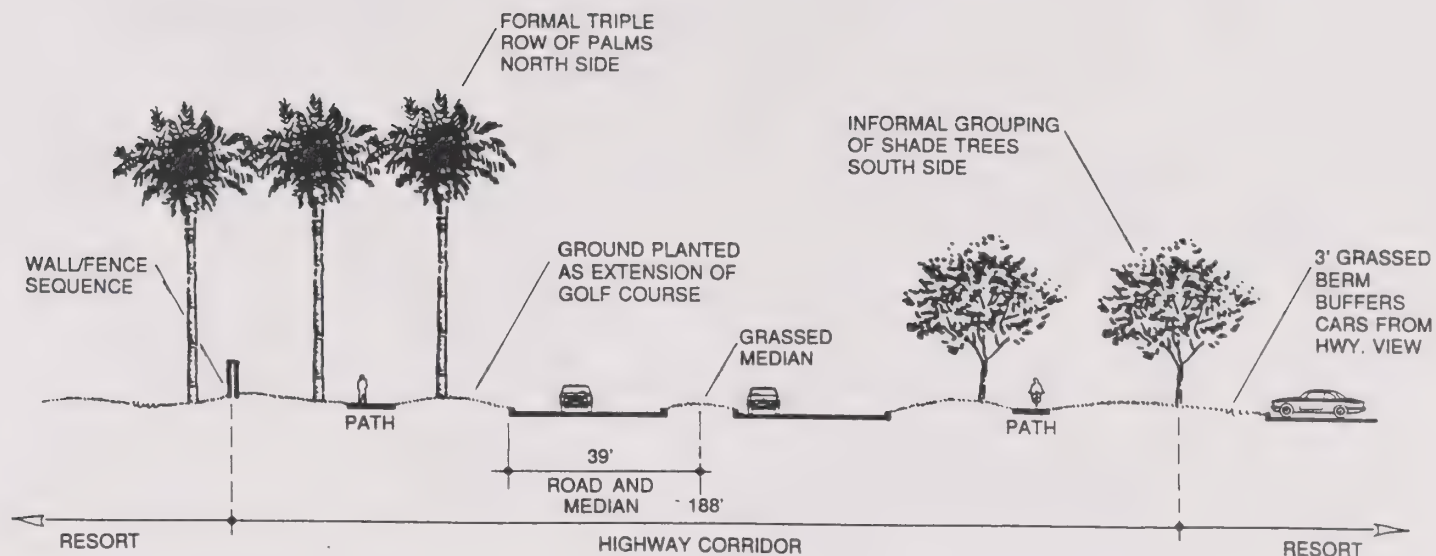


FIG. 11j

## RESORT/RESIDENTIAL - LANDSCAPE TYPE 6



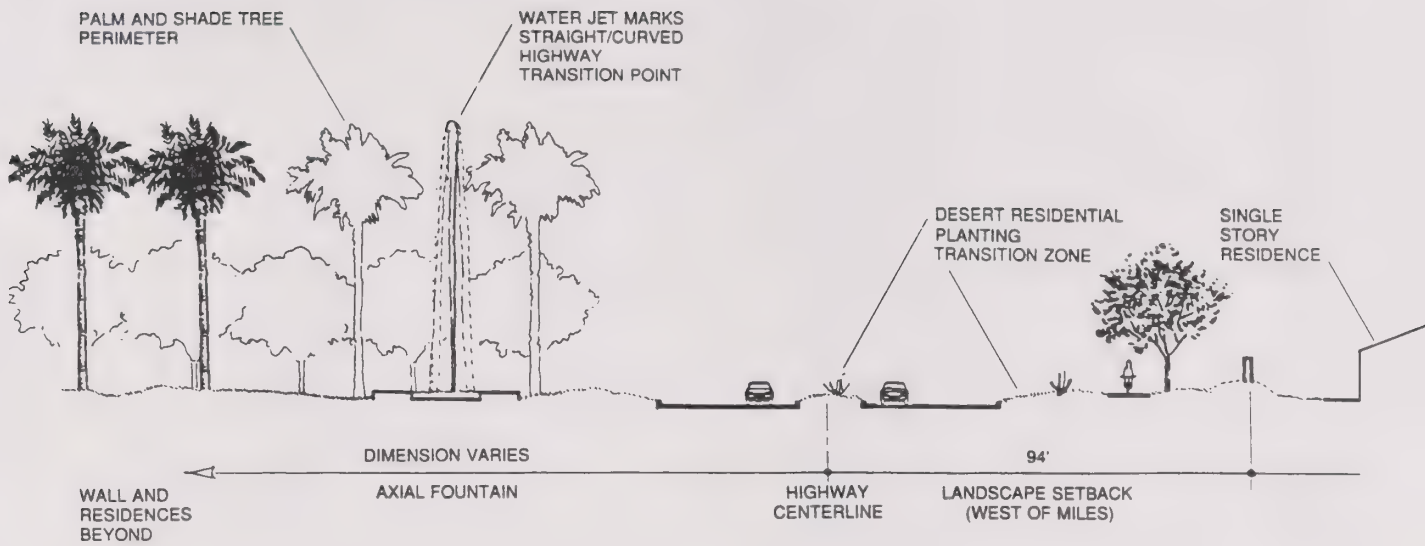


FIG. 11k

## TRANSITION - LANDSCAPE TYPE 7





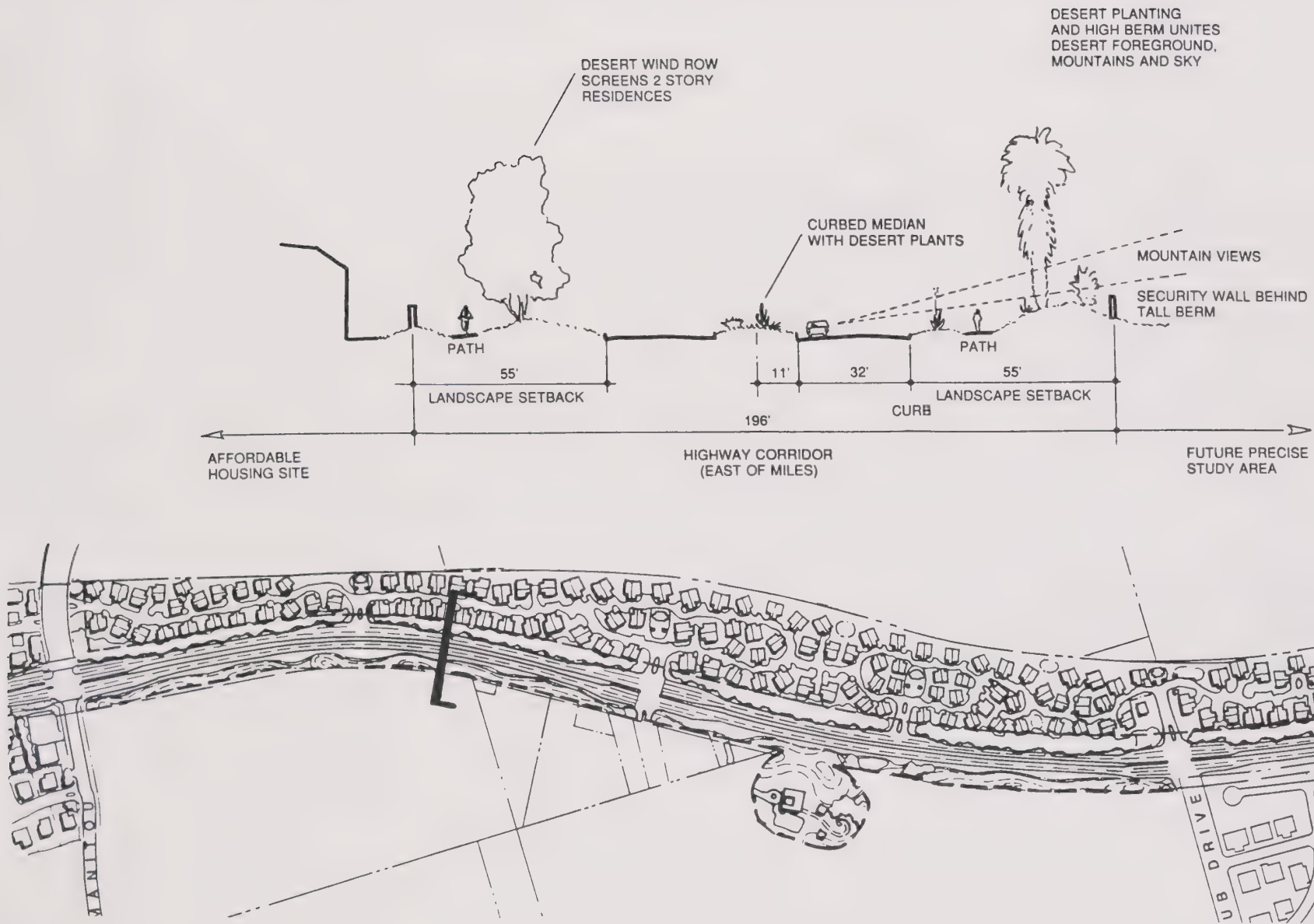


FIG. 111

## DESERT - LANDSCAPE TYPE 8



**SECTION 21.45.040**

**CIRCULATION**

- 1. Introduction**
- 2. Existing Conditions**
- 3. Traffic Volumes**
- 4. Analysis and Intersection Geometrics**
- 5. Traffic Control Devices**
- 6. Public Transit**
- 7. Bikeway/Golf Cart Path System**



## CIRCULATION

### Highway 111 Specific Plan

#### 1. INTRODUCTION

Highway 111 is a principal east-west arterial serving the urbanized portions of the Coachella Valley. As such, it serves to move traffic from between jurisdictions, connects residential and commercial land uses and is a spine in the overall circulation system of the valley. This function must be considered in the developed of a Specific Plan for the Highway 111 corridor as well as the circulation needs of the adjacent property.

The Circulation Element of the General Plan recognized the special conditions related to Highway 111 and required the preparation of a Specific Plan. Policies and criteria for the road design were included in the Circulation Element and are as follows.

- \* The street is to provide adequate lanes for Level of Service D operation to serve future traffic demands, with additional turning lanes at principal intersections to serve traffic demands.
- \* Separate bicycle/golf cart facilities (Class I) are to be provided.
- \* Traffic signal coordination should be provided to assist in providing for a smooth flow of traffic through the City.
- \* Signalized intersections should be spaced a half mile increments.





- \* Half signals should be utilized for intermediate locations where signalization is required.
- \* Right turn only access can be provided at selected locations where justified.
- \* Bus turnout areas should be provided at all potential bus stop locations.
- \* A raised median should be provided with left turns from Highway 111 into adjacent property permitted at limited locations.

## 2. EXISTING CONDITIONS

A study of the State Route 111 Corridor is being conducted by Wilbur Smith Associates for the Riverside County Transportation Commission and some data relative to existing conditions were obtained from that study. Specifically, daily volumes for March, 1990, at two locations were obtained and are illustrated on Figure 12a. These volumes were approximately 34,000 vehicles per day west of Cook and east of Eldorado. Peak hour volume data for the same period were also provided for Highway 111 at Cook, Rancho Palmeres, Eldorado, Club and Manitou-Miles.

In order to quantify existing traffic conditions, Intersection Capacity Utilization (ICU) analyses were completed for the PM peak hour at the major intersections along Highway 111. (The ICU methodology and relationship of ICU to Level of Service are described in Appendix A.) These ICU analyses are contained in Appendix B and summarized in Table 1. As indicated in Table 1, all intersections are currently operating at Level of Service B or better.









TABLE 1  
PM PEAK HOUR ICU SUMMARY

<u>INTERSECTION</u>	<u>ICU/LOS<sup>(1)</sup></u>		
	<u>EXISTING</u>	<u>EXISTING +PROJECT</u>	<u>EXISTING +PROJECT WITH IMPROVEMENTS</u>
Highway 111 & Cook	0.70/B	1.31/F	0.82/D
Highway 111 & Rancho Palmeres	0.49/A	0.91/E	0.65/B
Highway 111 & Eldorado	0.51/A	0.89/D	0.86/D
Highway 111 & Club Drive	0.49/A	0.81/D	
Highway 111 & Manitou-Miles	0.49/A	0.87/D	0.74/C

(1) ICU = Intersection Capacity Utilization  
LOS = Level of Service



These data indicate that the current Highway 111 design is operating at a Level of Service which is above minimums defined in the General Plan. The future conditions must also be examined to determine roadway needs.

### 3. SPECIFIC PLAN TRIP GENERATION

Proposed land use for 16 areas in the Highway 111 Corridor are illustrated on the Specific Plan Key (Figure 12c). Estimates were made of trips to be generated by each area on a daily and PM peak hour basis. These estimates are listed by area in Table 2. Review of Table 2 indicates an estimated 37,700 daily trip ends from the proposed uses with 3,580 occurring during the PM peak hour.

A trip distribution pattern was developed for the Highway 111 Corridor. This distribution was based upon data in the CVATS report and is illustrated on Figure 12b<sup>(1)</sup>. The estimated trip generation for each area was assigned to the street system in conformance with the distribution pattern. Fig. 12c illustrates the daily and peak hour traffic assignments for the buildout condition including an interchange on I-10 at Cook.

Daily volumes including existing, project and the sum of existing plus project are indicated on Figure 12a.

### 4. ANALYSIS AND INTERSECTION GEOMETRICS

The critical consideration in the development of design for Highway 111 are the peak hour intersection operations. For this initial review, ICU analyses were completed for the intersections at Cook, Rancho Palmeres, Eldorado, Club and Manitou-Miles for existing plus project conditions. In addition, planned development of the former Sunterra site was included in the analyses. These analyses are contained in Appendix B and the results listed in Table 1. As

---

(1) "Coachella Valley Area Transportation Study" Southern California Association of Governments, December, 1987. Table 3.



TABLE 2  
TRIP GENERATION

<u>AREA</u>	<u>LAND USE</u>	<u>ACRE</u>	<u>DU'S</u>	<u>TRIP ENDS/DU (ACRE)</u>			<u>TRIP ENDS</u>		
				<u>DAILY</u>	<u>PM IN</u>	<u>PM OUT</u>	<u>DAILY</u>	<u>PM IN</u>	<u>PM OU</u>
1	RLD	39.28	136	10	0.7	0.3	1400	95	40
	RMD	8.9	77	10	0.7	0.3	800	55	25
2	OFFICE	2.8	*	300	8	31	800	20	85
3	RVLD	37.5	112	10	0.7	0.3	1100	80	35
4	RVLD	35.0	105	10	0.7	0.3	1100	75	30
5	RLD	9.36	42	10	0.7	0.3	400	30	15
6	RLD	13.09	58	10	0.7	0.3	600	45	20
7	RLD	14.1	63	10	0.7	0.3	600	45	20
8	RLD	8.8	39	10	0.7	0.3	400	30	10
9	HOTEL	30.2	*	300	14	10	9100	420	300
10	HOTEL	6.84	*	300	14	10	2100	95	70
11	RLD	2.8	12	10	0.7	0.3	100	10	5



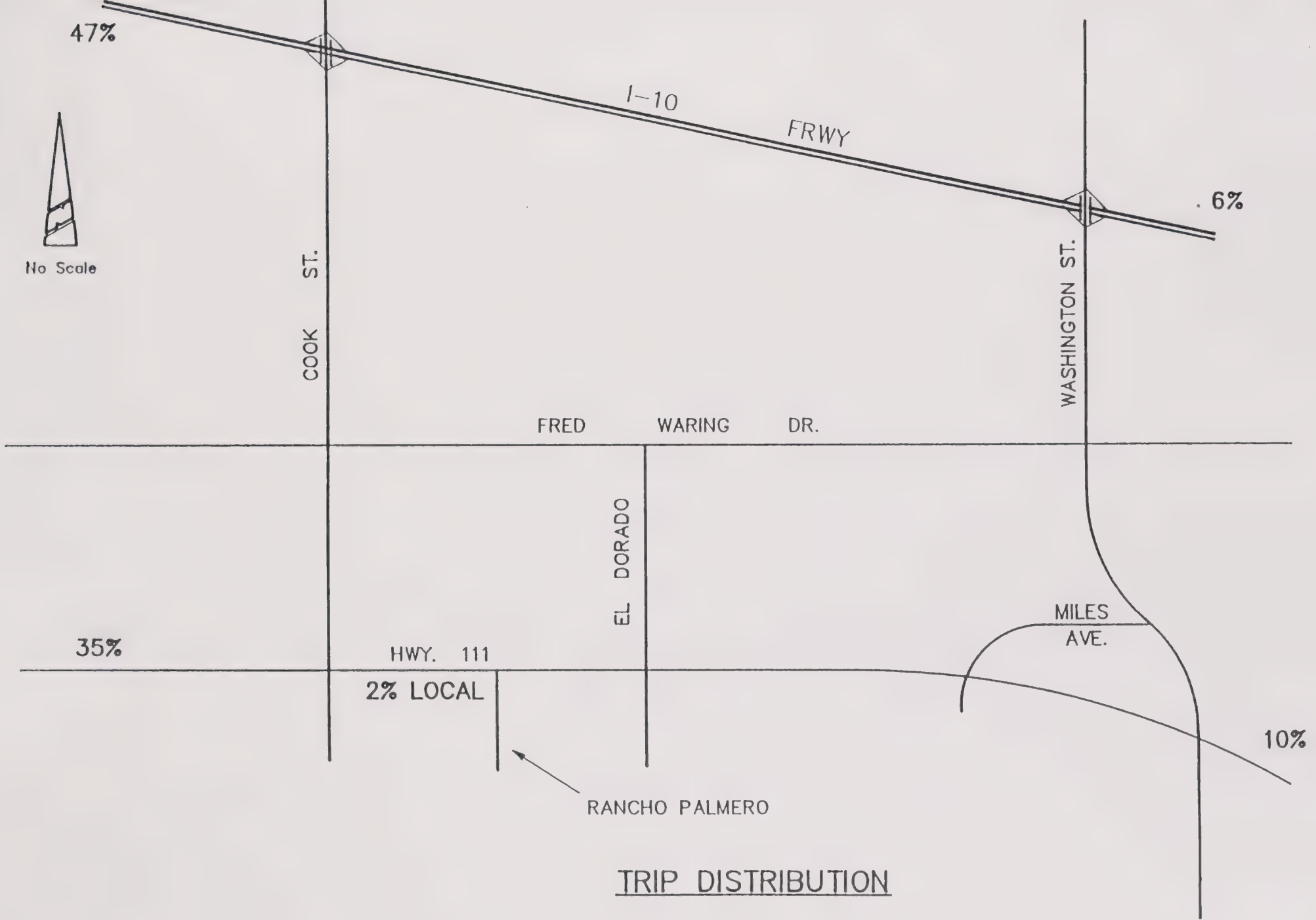


TABLE 2 (CONT.)

## TRIP GENERATION

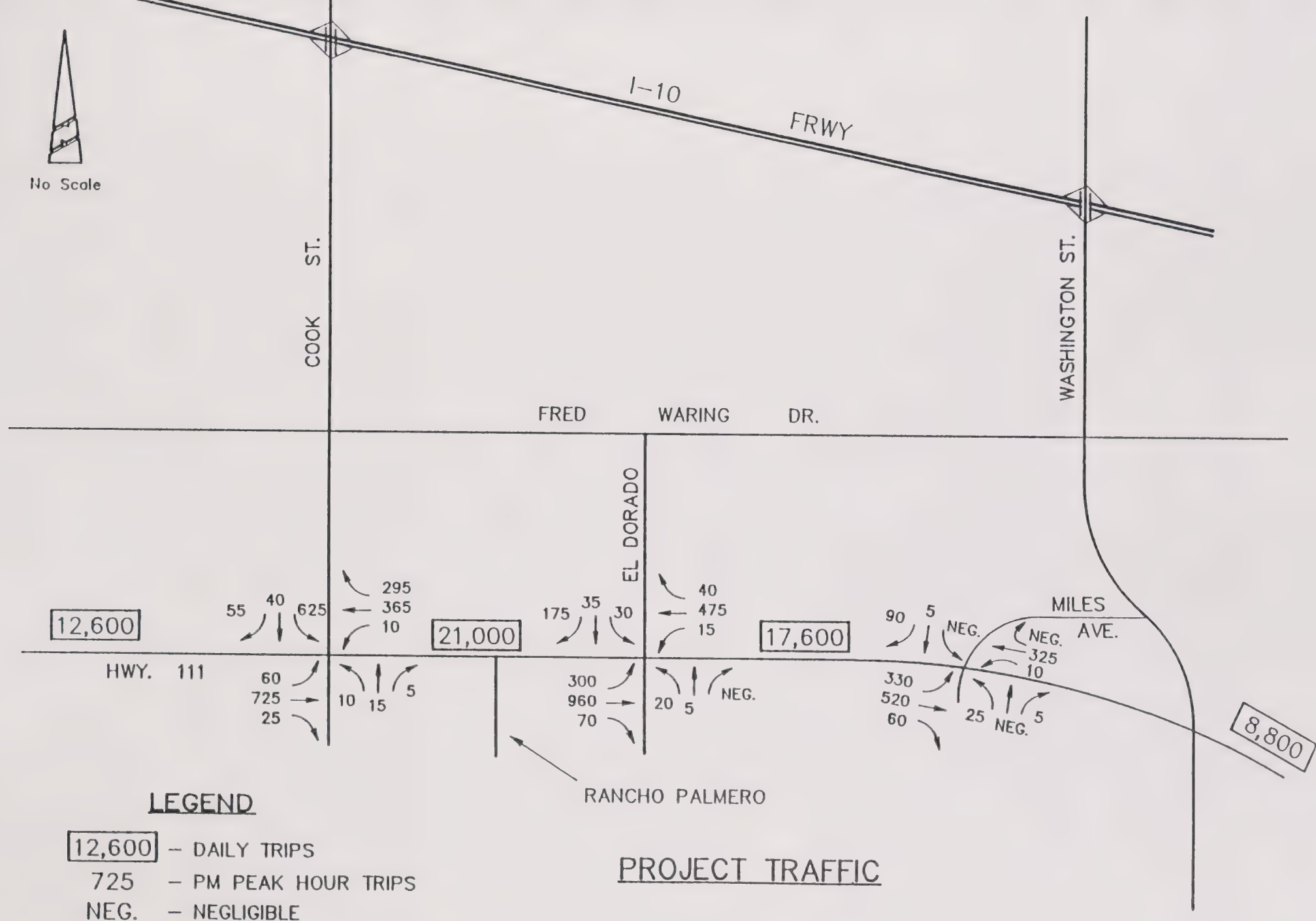
<u>AREA</u>	<u>LAND USE</u>	<u>ACRE</u>	<u>DU'S</u>	<u>TRIP ENDS/DU (ACRE)</u>			<u>TRIP ENDS</u>		
				<u>DAILY</u>	<u>PM IN</u>	<u>PM OUT</u>	<u>DAILY</u>	<u>PM IN</u>	<u>PM OUT</u>
12	RLD	2.8	12	10	0.7	0.3	1000	75	30
13	RMHD	14.96	225	10	0.7	0.3	2300	160	70
14	RVLD	163.46	490	10	0.7	0.3	4900	345	150
15	RMD	36.42	318	10	0.7	0.3	3200	220	95
16(a)	RVLD	189.5	568	10	0.7	0.3	5700	400	170
16(b)	RVLD	71.36	214	10	0.7	0.3	<u>2100</u>	<u>150</u>	<u>65</u>
<b>TOTAL</b>							<b>37,700</b>	<b>2,345</b>	<b>1,235</b>













indicated in Table 1, some modification from the standard geometrics were found to be needed at all intersections except Highway 111 at Club Drive. The intersection analyses and geometric recommendations are described in the following paragraphs.

**Highway 111 and Cook Street.** This is the principal intersection in the planning area and most critical with respect to traffic. As indicated by the ICU analyses, the existing geometrics of single left turn lanes and two through lanes will not be adequate in the future. In order to accommodate projected traffic demands, additional lanes will be required on both Highway 111 and Cook Street. In general, dual left turn lanes are required on all approaches and three through lanes are required on Highway 111. The recommended geometrics are summarized in Table 3.

**Highway 111 and Rancho Palmeres Drive.** With existing, other project and project traffic, the ICU value of this intersection is projected to be 0.91 or Level of Service E. This does not satisfy the General Plan criteria and indicates that modified geometrics will be required. Review of the ICU analysis reveals that the eastbound through movement is a major contributor to the ICU value. The addition of a third eastbound through lane reduces the ICU value to 0.65 or Level of Service B which is an acceptable condition.

**Highway 111 and Eldorado Drive.** As indicated in Table 1, this intersection is projected to operate with an ICU value of 0.87 or Level of Service D with the project and other traffic. While this appears to satisfy the General Plan criteria, the eastbound left turn volume of 386 vehicles indicates the need for dual left turn lanes for operational purposes. With dual eastbound left turn lanes, dual westbound lanes will also be provided. As a result of these dual left turn lanes, the ICU value is 0.86 or Level of Service D. While not recommended, it is suggested that three through lanes be provided.



TABLE 3  
RECOMMENDED INTERSECTION GEOMETRICS

<u>INTERSECTION</u>	<u>APPROACH LANES</u>											
	<u>NL</u>	<u>NT</u>	<u>NR</u>	<u>SL</u>	<u>ST</u>	<u>SR</u>	<u>EL</u>	<u>ET</u>	<u>ER</u>	<u>WL</u>	<u>WT</u>	<u>WR</u>
Highway 111 & Cook Street	2	2	-	2	1	1	2	3	-	2	3	1
Highway 111 & Rancho Palmeres	1	1	-	1	1	-	1	3	-	1	2	-
Highway 111 & Eldorado	1	2	-	1	2	-	2	2	-	2	2	-
Highway 111 & Club Drive	1	-	1	-	-	-	-	2	-	1	2	-
Highway 111 & Manitou-Miles	1	1	-	1	1	1	2	2	-	2	2	-





Highway 111 and Club Drive. This intersection is projected to operate at an ICU value of 0.81 or Level of Service D with existing geometrics. As result, no changes are recommended.

Highway 111 and Manitou-Miles. An ICU analysis was completed for this intersection and indicated an ICU value of 0.87 or Level of Service D with no improvements. Review of volume demands indicates an eastbound left turn of 495 which would require dual left turn lanes. While not recommended, it is suggested that three through lanes on Highway 111 be provided. The recommended geometrics are listed on Table 3.

## 5. TRAFFIC CONTROL DEVICES

All traffic control devices on Highway 111 must conform to the California Department of Transportation standards and criteria. Signs, striping and markings must conform with respect to size, shape, color and installation. Traffic signals must also conform and, in addition, should be utilized to improve and aid the flow of traffic through the area.

As indicated in the Introduction of this section, criteria and policies for Highway 111 are included in the Circulation Element of the General Plan. Of these, three specifically relate to traffic signals. The primary concern is that the signals be considered as a system that aids the movement of vehicles through the City. This relates to the spacing of signalized intersections and the General Plan suggests half mile increments. On this basis, no additional signals should be installed west of Manitou-Miles intersection. In addition, the location of new access points to the east of Manitou-Miles should be based upon this guideline.

An interconnected traffic signal system should be maintained through the City. Since this is a State Highway, CalTrans controls signal timing. The City should work with CalTrans and support efforts to coordinate traffic signals through the City.



The Specific Plan includes a raised median through the City. This will serve to restrict any driveway access to right turns only. In addition, new driveways should be discouraged and only allowed when proven to be necessary and of minimal impact to traffic movement on Highway 111. In special cases, half signals may be allowed to provide increased vehicular access.

## **6. PUBLIC TRANSIT**

The area is served by Sun Line Transit which currently provides service along Highway 111 as well as other routes. Connections to the majority of the Coachella Valley are provided. Specific designs for bus stop furniture are illustrated in other sections of the Specific Plan.

Locations of bus stops will be coordinated with Sun Line Transit. For planning purposes, a bus stop at each signalized intersection should be considered. These would be Cook, Rancho Palmeres, Eldorado, Club, Manitou-Miles and future unnamed streets to the east. Bus stops should be located on the far side of the intersection.

Bus turnouts are recommended. These should be 12 feet in width, 50 feet in length and have a 60 foot transition at each end. In addition, a concrete pad should be provided. The specific design should conform to the requirements of the Sun Line Transit agency.

## **7. BIKEWAY/GOLF CART PATH SYSTEM**

The City's General Plan, Circulation Element contains a recommended Golf cart and Bikeway System with facilities on Highway 111. This is defined as being physically separated from vehicular traffic by a physical barrier and having a minimum width of 6.5 feet.



A path of this type has been included in the Highway 111 Specific Plan. For this plan, it is also for use by pedestrian traffic. In order to accommodate bicycles, golf carts and pedestrians a minimum width of 12 feet will be required.

The path will be curvilinear in horizontal alignment. For safety purposes, the path will be at the intersection, in the normal sideways location, at cross streets.





# TABLE 4

## PROPERTY ACCESS GUIDELINES

### Highway 111 Specific Plan

#### SPECIFIC PLAN KEY (AREA)

#### ACCESS

- |         |   |
|---------|---|
| 1       | -Full access on Fred Waring - align with existing high school access (signal).<br>-Right turn only access on Highway 111, plus access via existing shopping center signalized access.   |
| 2       | -Right turn only access on Highway 111.   |
| 3       | -Access on Cook Street and from existing Desert Horizons County Club.   |
| 4 & 5 * | -Full access on Cook Street, 300 feet south of Highway 111.<br>-Right turn only access on Highway 111, midway between Cook Street and Rancho Palmero Drive.<br>-Full access on Rancho Palmero Drive, near southerly property line of 5. |
| 6       | -Full access on Eldorado Drive, near southerly property line.<br>-Right turn only access on Highway 111, at west property line.   |
| 7 & 8 * | -Full access on Eldorado Drive to align with access to 6.<br>-Right turn only access to Highway 111 at property line between areas.   |
| 9       | -Full access on Eldorado Drive.<br>-Possible right turn only access on Highway 111 - needs to be reviewed with specific development plan.   |



## PROPERTY ACCESS GUIDELINES (cont.)

### Highway 111 Specific Plan

#### SPECIFIC PLAN KEY (AREA)

#### ACCESS

10	-Full access on side street. -No access to Highway 111.
11	-Access via adjacent parcels - No direct access to Highway 111.
12	-Full access on Manitou.
13	-Right turn only access on Miles Avenue.
15 **	-Related to potential realignment of Miles. -Spacing of principal access per General Plan guidelines.
16a & 16b **	-Subject to additional study - No direct access to Washington is recommended.

\* Must have reciprocal access agreements.

\*\* Subject to Precise Plan Study results.



**SECTION 21.45.050**  
**PUBLIC INFRASTRUCTURE**

**1. Goals and Policies**

(a) Goals:

- (1) Provide adequate and cost effective public services and infrastructure.
- (2) Design infrastructure facilities to minimize unsightliness.

(b) Policies:

- (1) Begin and/or continue City programs to implement the Public Service Goals and Policies of the 1988 General Plan.
- (2) Place utility lines and facilities underground wherever feasible.
- (3) Use landscape screening to buffer utility facilities from view, as required.
- (4) All infrastructure and utility facilities should be constructed to the satisfaction of the City Engineer, and ALC as appropriate.

**2. Water, Sanitary Sewer, Storm Drainage and Communications and Energy**

Existing trunk lines, major laterals and pump stations for domestic and fire water, sanitary sewer and storm drainage within the Specific Plan Area are indicated in Figure 13a. Existing trunk lines and major laterals for natural gas, telephone and electricity within the Specific Plan Area are indicated in Figure 13b. These facilities are considered generally adequate by the City Engineer for the land uses proposed within the Specific Plan Area.

**3. Solid Waste**

The existing solid-waste disposal Master Plan of the County of Riverside, capacity of facilities operated by the City's contract disposal service, and existing City trash-handling standards are considered adequate to serve the land uses proposed within the Specific Plan Area, according the General Plan.

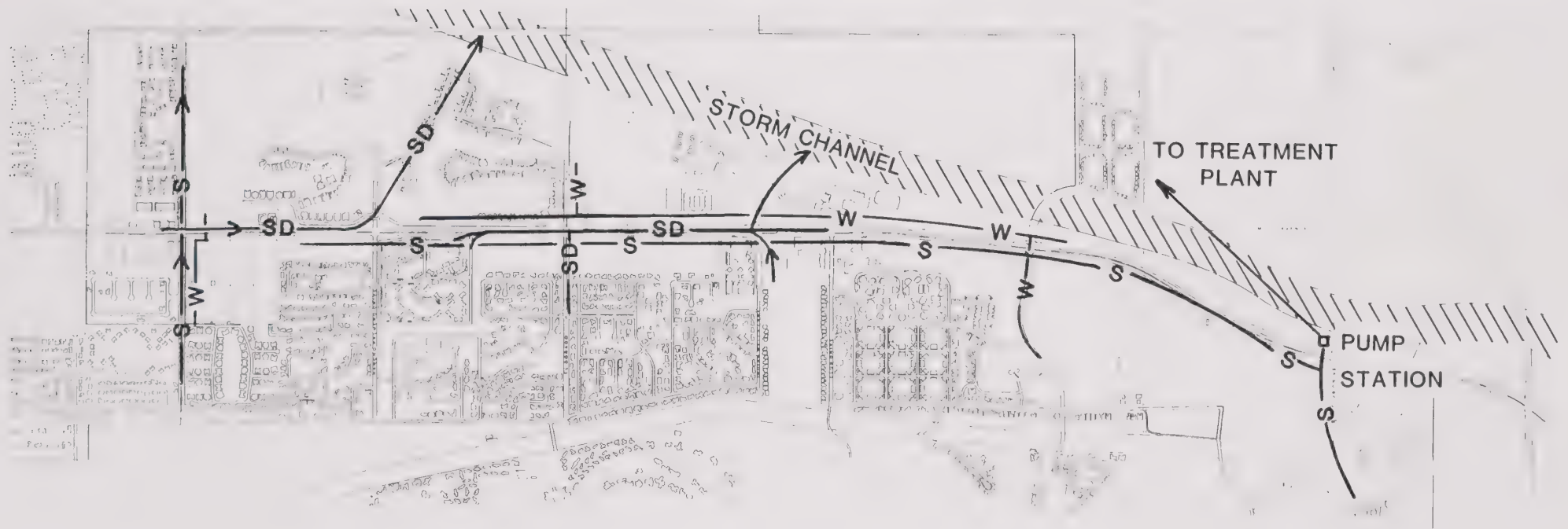




#### **4. Other Public Services and Facilities**

The programs outlined in the 1988 General Plan will provide adequate levels of service for projected police, fire protection, educational facilities, hospital facilities, park and library requirements. Potential library/park sites are provided within the Specific Plan Area; see Public Facilities Overlay Plan, Figure 7.





## KEY

- W — WATER
- S — SEWER
- SD — STORM DRAIN

FIG. 13a

## UTILITY MAP





## KEY

- G — GAS
- E — ELECTRICAL
- T — TELEPHONE

FIG. 13b

## ENERGY MAP





## **SECTION 21.45.060**

### **IMPLEMENTATION**

#### **1. Goals and Policies**

##### **(a) Goals:**

- (1) Provide for the present and future public facility requirements of the City.
- (2) Encourage the conservation and effective utilization of land and financial resources.
- (3) Promote flexibility for the City to select from a range of potential implementation/finance mechanisms and opportunities.

##### **(b) Policies:**

- (1) Designate and retain sites for possible future public facilities.
- (2) Require full developer participation as appropriate, for financing of public improvements.
- (3) Utilize County and State and federal funding resources where possible, to augment City resources and developer participation.
- (4) Institute user fees, where appropriate.

#### **2. Implementation Mechanisms**

State law enables cities to implement programs which result in varying degrees of land control, physical development, operations and maintenance. The costs of these programs is borne either by the public or the private sectors. In the first category are programs based on tax revenues, bonds and tax-increment sources. In the second category are included programs funded by user fees, developer in-lieu fees or exactions, or private donations. The following are examples of the mechanisms available for the implementation of the Specific Plan.



(a) Land Control

(1) Public Sector Expenditure

- a. City Purchase: "The city by ordinance can impose requirements that property be set aside for public purposes for later purchase by the city...for parks, recreational facilities, fire stations and libraries...for example."
- b. Zoning, subdivision and use permit regulations.
- c. City purchase of use easement.
- d. Redevelopment Agency purchase/Owner Participation Agreement

(2) Private Sector Expenditure

- a. Dedications and easements granted to the city.
- b. Quimby Act: "If a city's general plan or specific plan contains policies and standards for park and recreation facilities, the city by ordinance may impose on a residential subdivision a requirement or park land dedication or fees in lieu thereof for park or recreational purposes."
- c. Map Act: "A city has the authority, under proper circumstances, to require as a condition of subdivision approval the dedication of land or the payment of fees for various improvements not otherwise mentioned in the Map Act, such as: child care centers, public art, police stations, fire stations and libraries. This authority is based on the principle that if the city's general plan requires these types of improvements, the subdivision must provide them." In addition, the Map Act vests in cities the regulation and control of the 'design' and 'improvement' of subdivisions (including) such other specific physical requirements in the plan and configuration of the entire subdivision as may be necessary to ensure consistency with, or implementation, of the general plan or any applicable specific plan."
- d. Private Donation

(b) Capital Improvements

(1) Public Sector Expenditure



- a. General Fund purchase
- b. Tax increment revenues
- c. Municipal Bonds
- (2) Private Sector Expenditure
  - a. Quimby fees
  - b. Map Act improvements or in-lieu fees
  - c. Revenue bond income
  - d. Developer exaction/Developer Agreement.
  - e. Private Donation
  - f. Mello/ Roos: Community Facilities Districts (CFD) to finance the "purchase, construction, expansion or rehabilitation of any real or other tangible property with an estimated useful life of five years or longer which is necessary to meet increased demands placed upon local agencies as the result of development or rehabilitation occurring within the district."
  - g. Benefit Assessment District
- (c) Operations and Maintenance
  - (1) Public Sector Expenditure
    - a. General Fund
  - (2) Private Sector Expenditure
    - a. Benefit Assessment District
    - b. Mello Roos: The "special tax can also pay for police and fire services, recreation programs and park maintenance services...as long as the services supported constitute an increase to the level of services prior to the formation of the CFD."
    - c. User Fees





### **3. Public Facilities Implementation**

In addition to landscape improvements for Highway 111, the Specific Plan proposes that the following public facilities be established, operated and maintained:

1. Grove Gate North
2. Grove Gate South
- 3A. Community Center Landscape
- 3B. Community Center/Public Library
4. Grove Preserve
5. Grove Remnant
6. Fountain
7. Cahuilla Interpretive Center/National Monument



# HIGHWAY 111 SPECIFIC PLAN

## IMPLEMENTATION TABLE

PROJECT	IMPLEMENTATION ALTERNATIVES								
	LAND CONTROL			CAPITAL IMPROVEMENTS			OPERATIONS & MAINTENANCE		
	BUDGET	MECHANISM		BUDGET	MECHANISM		BUDGET	MECHANISM	
		Public	Private		Public	Private		Public	Private
1. GROVE GATE NORTH	\$0.0M	Z	D	\$0.5M	CP:GF,TI,MB	MA	-	CP,GF	LLMD,MR
2. GROVE GATE SOUTH	\$0.0M	Z	D	\$0.5M	CP:GF,TI,MB	MA	-	CP,GF	LLMD,MR
3A. COMMUNITY CENTER LANDSCAPE	\$0.0M	Z,CP:GF,TI,MB	D,Q,MA,PD	\$0.2M	CP:GF,TI,MB	PD,Q,MA,MR	-	CP,GF	MR
3B. COMMUNITY CENTER/PUBLIC LIBRARY	\$3.5	Z,CP:GF,TI,MB	D,Q,MA,PD	\$5.1M	CP:GF,TI,MB	PD,Q,MA,MR	-	CP,GF	MR
4. GROVE PRESERVE	\$0.6M	Z,CP:GF,TI,MB	D,Q,MA,PD	\$0.3M	CP:GF,TI,MB	PD,Q,MA,MR	-	CP,GF	LLMD,MR
5. GROVE REMNANT	\$1.7M	Z,CP:GF,TI,MB	D,Q,MA,PD	\$0.7M	CP:GF,TI,MB	PD,Q,MA,MR	-	CP,GF	LLMD,MR
6. FOUNTAIN	\$0.0	-	-	\$0.5M	-	?	-	-	LLMD
7. CAHUILLA CENTER/MONUMENT	\$0.4M	Z	D	\$1.0M	F,CP:GF,TI,MB	PD,Q,MA,MR	-	CP,GF	LL,MD,MR,UF
8. HIGHWAY 111 LANDSCAPE	\$0.0	Z	-	\$10.0* *Excluding wall	-	PD	-	-	LLMD
TOTAL	\$6.2M			\$18.8M					

### KEY

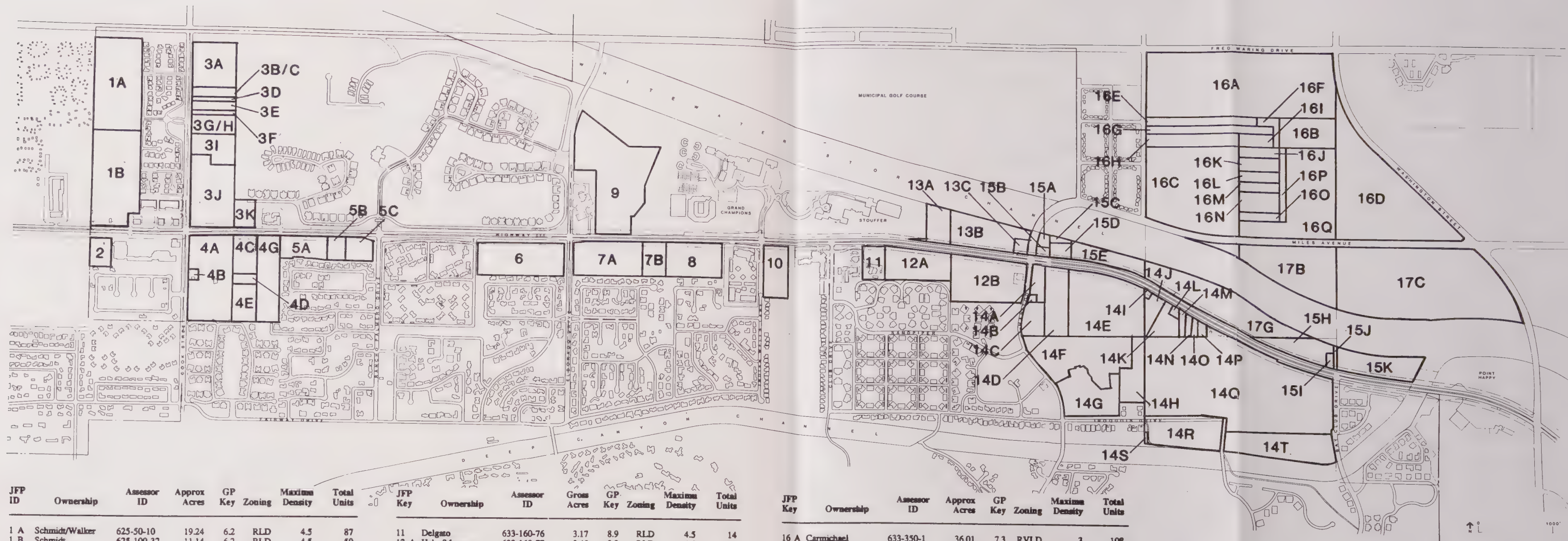
CP CITY PURCHASE  
D DEDICATION  
F FEDERAL  
GF GENERAL FUND

LLMD LANDSCAPE/LIGHTING MAINTENANCE DISTRICT  
MA MAP ACT  
MB MUNICIPAL BOND  
MR MELLO-ROOS

PD PRIVATE DONATION  
Q QUIMBY FEES  
RB REVENUE BOND  
TI TAX INCREMENT  
Z ZONING REGULATIONS







JFP ID	Ownership	Assessor ID	Approx Acres	GP Key	Zoning	Maximum Density	Total Units
1 A	Schmidt/Walker	625-50-10	19.24	6.2	RLD	4.5	87
1 B	Schmidt	625-100-32	11.14	6.2	RLD	4.5	50
1 C	Schmidt		8.90	6.3	RMD	8.75 *	78
2	P.Spg. Investmt	625-150-8	2.80	10.3	OP	N/A	N/A
3 A	Bertulet	633-21-39	8.66	2.2	RVLD	3	26
3 B	Szczepanski	633-21-40	1.80	2.2	RVLD	3	5
3 C	Szczepanski	633-21-41	0.92	2.2	RVLD	3	3
3 D	Crawford	633-21-31	0.92	2.2	RVLD	3	3
3 E	Markis	633-21-44	1.83	2.2	RVLD	3	5
3 F	Schacklett	633-21-30	0.92	2.2	RVLD	3	3
3 G	Barker	633-21-42	1.83	2.2	RVLD	3	5
3 H	Barker	633-21-43	1.83	2.2	RVLD	3	5
3 I	Koo	633-21-32	4.67	2.2	RVLD	3	14
3 J	Koo	633-21-34	12.89	2.2	RVLD	3	39
3 K	Teamsters	633-21-26	2.10	2.2	RVLD	3	6
4 A	Wolf	633-30-4	16.35	4.1	RVLD	3	49
4	Wolf	633-30-14					
4 B	Thompson	633-30-13	0.45	4.1	RVLD	3	1
4 C	Hanussek	633-30-5	4.10	4.1	RVLD	3	12
4 D	Wolf	633-30-6	1.04	4.1	RVLD	3	3
4 E	Wolf	633-30-7	4.01	4.1	RVLD	3	12
4 F	Wolf	633-30-3	0.03	4.1	RVLD	3	0
4 G	Wolf	633-30-8	9.04	4.1	RVLD	3	27
5	Kensrue	633-30-9	2.28	4.4	RLD	4.5	10
5 A	Kensrue	633-30-10	2.60	4.4	RLD	4.5	12
5 B	Leyva	633-30-11	1.90	4.4	RLD	4.5	9
5 C	Westward Ho	633-30-12	2.80	4.4	RLD	4.5	13
6	Inwell Invest	633-90-90	13.09	4.5	RLD	4.5	59
7 A	Rosnoke	633-170-11	13.00	4.6	RLD	4.5	59
7 B	Walters	633-170-4	4.37	4.6	RLD	4.5	20
8	McDermott	633-170-12	8.80	4.6	RLD	4.5	40
9	Teamsters	633-170-11	30.20	5.3	RC	N/A	N/A
10	IW Country Club	633-240-22	6.84	8.1A	RC	N/A	N/A

(Continued)

\* Affordable Housing with 25% Density Bonus

JFP Key	Ownership	Assessor ID	Gross Acres	GP Key	Zoning	Maximum Density	Total Units
11	Delgado	633-160-76	3.17	8.9	RLD	4.5	14
12 A	Hahn/Morrow	633-160-77	8.45	8.9	RLD	4.5	38
12 B	Hahn/Morrow	633-370-34	14.59	8.9	RLD	4.5	66
13 A	Green	633-150-11	4.48	5.5	RHMD	15 *	67
13 B	Thompson	633-310-4	10.40	5.5	RHMD	15 *	156
13 C	Wood	633-310-13	0.83	5.5	RHMD	15 *	12
14 G			10.90	8.3	RVLD	3	33
14 H	Ryan Oil	633-380-8	5.20	8.3	RVLD	3	16
14 I	Alloro	633-410-18	0.20	8.3	RVLD	3	1
14 J	TGP Ltd	633-410-16	2.41	8.3	RVLD	3	7
14 K	Occidental Col	633-410-6	3.33	8.3	RVLD	3	10
14 L	City of IW	633-410-13	0.60	8.3	RVLD	3	2
14 M	Ryan Oil	633-410-7	0.76	8.3	RVLD	3	2
14 N	Rogers	633-410-19	0.59	8.3	RVLD	3	2
14 O	TGP Ltd	633-410-15	1.14	8.3	RVLD	3	3
14 P	Bray	633-410-14	0.21	8.3	RVLD	3	1
14 Q	Ryan Oil	633-420-6	65.73	8.3	RVLD	3	197
14 R	Ryan Oil	623-270-20	9.64	8.3	RVLD	3	29
14 S		623-270-20	0.14	8.3	RVLD	3	0
14 T	Ryan Oil	623-270-18	12.60	8.3	RVLD	3	38
15 A	Darian	633-310-5	0.58	7.1	RMD	8.75 *	5
15 B	Darian	633-310-6	0.48	7.1	RMD	8.75 *	4
15 C		633-310-11	0.62	7.1	RMD	8.75 *	5
15 D	Bemko	633-370-3	1.74	7.1	RMD	8.75 *	15
15 E	Peek	633-370-35	4.75	7.1	RMD	8.75 *	42
15 F		633-410-12	0.09	7.1	RMD	8.75 *	1
15 G	TGP Ltd	633-470-17	15.25	7.1	RMD	8.75 *	133
15 H	Ryan Oil	633-410-8	5.29	7.1	RMD	8.75 *	46
15 I	CVCWD	633-410-9	0.45	7.1	RMD	8.75 *	4
15 J	City of IW		0.24	7.1	RMD	8.75 *	2
15 K	Bunch	613-411-5	7.53	7.1	RMD	8.75 *	66

Subtotals not including  
Sphere of Influence

443.93

1823

\* Affordable Housing with 25% Density Bonus

JFP Key	Ownership	Assessor ID	Approx Acres	GP Key	Zoning	Maximum Density	Total Units
16 A	Carmichael	633-350-1	36.01	7.3	RVLD	3	108
16 A	Carmichael	633-350-1	16.29	7.3	RVLD	3	49
16 B	Carmichael	633-350-9	6.69	7.3	RVLD	3	20
16 B	Carmichael	633-350-9	0.64	7.3	RVLD	3	2
16 C	TGP Ltd	633-350-2	34.10	7.3	RVLD	3	102
16 D	TGP Ltd	613-421-1	38.03	7.3	RVLD	3	114
16 D	TGP Ltd	613-421-1	1.47	7.3	RVLD	3	4
16 E	Indiana U	633-350-8	4.00	7.3	RVLD	3	12
16 F	Indiana U	633-350-10	1.68	7.3	RVLD	3	5
16 G	Indiana U	633-350-5	4.97	7.3	RVLD	3	15
16 H	Indiana U	633-350-2	5.22	7.3	RVLD	3	16
	Indiana U	633-350-4	2.00	7.3	RVLD	3	6
16 J	Indiana U	633-350-5	2.00	7.3	RVLD	3	6
16 K	Indiana U	633-350-7	2.30	7.3	RVLD	3	7
16 L	Indiana U	633-350-9	2.00	7.3	RVLD	3	6
16 M	Indiana U	633-350-15	2.00	7.3	RVLD	3	6
16 N	Indiana U	633-350-11	4.00	7.3	RVLD	3	12
16 O	Indiana U	633-350-13	1.50	7.3	RVLD	3	5
16 P	Indiana U	633-350-16	2.00	7.3	RVLD	3	6
16 Q	Indiana U	633-350-14	22.48	7.3	RVLD	3	67
17 A	TGP Ltd	633-410-22	1.36	7.3	RVLD	3	4
17 B	TGP Ltd	633-410-21	16.50	7.3	RVLD	3	50
17 C	TGP Ltd	613-411-11	53.50	7.3	RVLD	3	161

Sphere of Influence

260.74

752

Total including  
Sphere of Influence

704.67

2605

FIG. 14

## PARCEL INVENTORY

JOHNSON FAIR AND PEREIRA ASSOCIATES





## APPENDIX I

## PLANT LIST

The following plants thrive in the Coachella Valley. This list offers a guide to plants and water needs (L=low water use, M=medium, H=high, R=Riparian). Plants are further keyed to the eight landscape types illustrated in Figure 10.

## TREES

	WATER NEEDS			LANDSCAPE TYPES							
	(L)	(M)	(H)	1	2	3	4	5	6	7	8
<b>Arid Natives</b>											
Acacia smallii (Sweet acacia)	(L)	-	-	-	-	-	4	-	6	7	8
Cercidium floridum (Blue palo verde)	(L)	-	-	-	-	-	4	-	-	7	8
C. microphyllum (Foothill palo verde)	(L)	-	-	-	-	-	4	-	-	7	8
C. praecox (Sonoran palo verde)	(L)	-	-	-	-	-	-	-	-	7	8
Chilopsis linearis (Desert willow)	(R)	-	-	-	-	-	-	-	-	7	8
Cupressus arizonica (Arizona cypress)	(L)	-	-	-	-	-	-	-	-	7	8
Dalea spinosa (Smoke tree)	(L)	-	-	-	-	-	-	-	-	7	8
Fraxinus velutina (Arizona ash)	-	(M)	-	-	-	-	-	-	-	7	8
Lysiloma thomberi (Feather bush)	(L)	-	-	-	-	-	-	-	-	7	8
Olneya tesota (Ironwood)	(L)	-	-	-	-	-	-	-	-	7	8
Parkinsonia aculeata (Mexican palo verde)	(L)	-	-	-	-	-	-	-	-	7	8
Pithecellobium flexicaule (Texas ebony)	(L)	-	-	-	-	-	4	-	-	7	8
Platanus wrightii (Arizona sycamore)	-	-	(R)	-	-	-	-	-	-	7	8
P. acerifolia (London plane tree)	-	-	(H)	-	-	-	-	-	6	7	8
Populus fremonti (Fremont cottonwood)	-	-	(H)	-	-	-	-	-	-	7	8
Prosopis chilenses (Chilean mesquite)	-	(M)	-	-	-	-	4	-	6	7	8
P. alba (Argentine mesquite)	-	(M)	-	-	-	-	4	-	6	7	8
Sambucus caerulea (Mexican elder)	-	-	(H)	-	-	-	-	-	-	7	8



TREES (continued)	WATER NEEDS			LANDSCAPE TYPES							
	(L)	(M)	(H)	1	2	3	4	5	6	7	8
<b>Non-natives</b>											
Acacia salicina	-	(M)	-	-	-	-	-	-	-	7	-
A. saligna (Weeping acacia)	-	(M)	-	-	-	-	-	-	-	7	-
A. stenophylla (Shoestring acacia)	(L)	-	-	-	-	-	4	-	-	7	8
Bauhinia sp. (Orchid tree)	-	(M)	-	-	-	3	-	5	-	7	-
Brachychiton populneus (Bottle tree)	-	(M)	-	-	-	-	-	5	6	7	-
Ceratonia siliqua (Carob tree)	(L)	-	-	-	-	3	-	5	6	7	-
Chorisia speciosa (Silk floss tree)	-	-	(H)	-	-	3	-	-	6	7	-
Citrus - Pomelo (Grapefruit)	-	-	(H)	-	2	-	-	-	-	-	-
Eucalyptus microtheca (Eucalyptus)	-	(M)	-	-	-	-	-	-	-	7	8
E. spathulata (Narrow leafed gimlet)	-	(M)	-	-	-	-	-	-	-	7	8
Fraxinus uhdei (Shamel Ash)	-	-	(H)	1	2	3	-	5	-	-	-
Geijera parviflora (Australian willow)	-	(M)	-	-	-	3	4	5	6	7	-
Grevillea robusta (Silk oak)	-	(M)	-	-	-	-	-	-	-	7	-
Jacaranda mimosifolia (Jacaranda)	-	(M)	-	-	-	3	-	5	6	7	-
Lagerstromia indica (Crape myrtle)	-	(M)	-	-	-	3	-	5	6	7	-
Nerium oleander (Oleander)	(L)	-	-	-	-	-	-	-	-	7	-
Olea europea (Swan hill olive)	(L)	-	-	-	-	3	-	5	6	7	8
Pinus brutia (Pine)	-	(M)	-	-	-	-	-	-	-	7	-
P. canariensis (Canary island pine)	-	(M)	-	-	-	-	-	-	6	7	-
P. pinea (Italian stone pine)	(L)	-	-	-	-	-	-	5	6	7	-
Pistacia chinensis (Chinese pistacia)	-	(M)	-	-	-	-	-	-	6	-	-
Populus alba (White poplar)	-	-	(H)	-	-	-	-	-	6	7	8
Prunus v. 'Krauteri' (Krauter purple plum)	-	(M)	-	-	-	3	-	-	6	-	-
Pyrus kawakamii (Evergreen pear)	-	-	(H)	1	2	3	-	5	6	-	-
Quercus suber (Cork oak)	(L)	-	-	-	-	-	-	-	6	7	-
Q. ilex (Holly oak)	(L)	-	-	-	-	-	-	5	6	7	-
Q. virgina (Virginia oak)	-	(M)	-	-	-	3	-	5	6	7	-
Rhus lancea (African sumac)	(L)	-	-	-	-	3	-	5	6	7	8
Schinus molle (California pepper)	(L)	-	-	-	-	3	-	5	6	7	8
S. terebinthefolius (Brazilian pepper)	-	(M)	-	-	-	3	-	5	6	7	-
Vitex agnus-castus (Chaste tree)	(L)	-	-	-	-	-	-	-	-	7	8

## PALMS

Brahea armata (Mexican blue fan palm)	(L)	-	-	-	-	3	4	5	6	7	8
B. edulis (Guadalupe palm)	(L)	-	-	-	-	3	4	5	6	7	8
Butia capitata (Pindo palm)	(L)	-	-	-	-	3	4	5	6	7	8
Chaemerops humilis (Dwarf fan palm)	-	(M)	-	1	-	3	4	5	6	7	-
Cycas revoluta (Sago palm)	-	(M)	-	-	-	-	-	-	-	-	-
Phoenix dactilifera (Date palm)	-	-	(H)	1	2	3	4	5	6	-	-
Washingtonia filifera (California fan palm)	-	-	(H)	-	-	3	-	5	-	7	8
Washingtonia robusta (Mexican fan palm)	-	-	(H)	-	-	3	-	-	-	-	-



SHRUBS	WATER NEEDS			LANDSCAPE TYPES							
	(L)	(M)	(H)	1	2	3	4	5	6	7	8
<b>Arid Native</b>											
Baccaris sarothoides (Desert broom)	(L)	-	-	-	-	-	-	-	-	7	8
Caesalpine pulcherrima (Bird of paradise)	(L)	-	-	-	-	-	4	-	6	7	8
C. gilliesii (Yellow bird of paradise)	(L)	-	-	-	-	-	-	-	-	7	8
Calliandra eriophylla (Fairy duster)	(L)	-	-	-	-	-	4	-	6	7	8
Cassia artemidioides (Feathery cassia)	(L)	-	-	-	-	-	4	-	6	7	8
C. nemophila (Bushy senna)	(L)	-	-	-	-	-	4	-	6	7	8
C. phyllodinea (Desert cassia)	(L)	-	-	-	-	-	4	-	-	7	8
C. wislizenii (Shrubby senna)	(L)	-	-	-	-	-	4	-	-	7	8
Dodenea viscosa (Green hop bush)	(L)	-	-	-	-	-	-	-	-	7	8
Encelia farinosa (Brittle bush)	(L)	-	-	-	-	-	4	-	-	7	8
Larrea tridentata (Creosote bush)	(L)	-	-	-	-	-	-	-	-	7	8
Leucophyllum candidum (Silver cloud)	(L)	-	-	-	-	-	4	-	6	7	8
L. frutescens (Texas ranger)	(L)	-	-	-	-	-	4	-	6	7	8
L. laevigatum (Chihualuan sage)	(L)	-	-	-	-	-	4	-	6	7	8
L. zygophyllum ("Blue ranger")	(L)	-	-	-	-	-	4	-	6	7	8
Rhus ovata (Sugar bush)	(L)	-	-	-	-	-	-	-	-	7	8
Ruellia peninsularis (Blue ruellia)	(L)	-	-	-	-	-	4	-	6	7	8
Salvia clevelandii (Chaparrel salvia)	(L)	-	-	-	-	-	-	-	-	7	8
S. greggii (Salvia)	(L)	-	-	-	-	-	4	-	6	7	8
S.leucophylla	(L)	-	-	-	-	-	4	-	-	7	8
Simmondsia chinensis (Jojoba)	(L)	-	-	-	-	-	4	-	-	7	8
Tecoma stans (Yellow bells)	(L)	-	-	-	-	-	4	-	6	7	8

### Introduced Non-native

Asparagus densiflorus 'Sprengerii'	-	(M)	-	-	-	3	4	5	6	-	-
Bougainvillea sp. (La Jolla bougainvillea)	(L)	-	-	1	-	3	4	5	6	7	-
Carissa grandiflora (Natal plum)	-	(M)	-	1	-	3	4	5	6	7	-
Cortaderia selloana (Pampas grass)	-	(M)	-	-	-	-	4	-	-	7	8
Euryops virides (Green euryops)	-	-	(H)	1	-	3	-	5	6	7	-
Juniperus prostrata (Prostrate juniper)	-	(M)	-	1	-	3	4	5	6	7	-
J. sabina 'Tameriscifolia' (Tam juniper)	-	(M)	-	1	-	3	4	5	6	-	-
J. var. 'Seagreen' (Seagreen juniper)	-	(M)	-	1	-	3	4	5	6	7	-
Ilex vomitoria (Stokes holly)	-	(M)	-	1	-	3	4	5	6	7	-
Lantana camara (Bush lantana)	(L)	-	-	-	-	-	4	-	-	7	8
Nandina domestica (Heavenly bamboo)	-	-	(H)	1	-	3	4	5	6	7	-
Nerium oleander 'Petite' (Dwarf oleander)	(L)	-	-	1	-	-	4	-	-	-	-
Pennisetum cupreum (Purple fountain grass)	(L)	-	-	-	-	-	4	-	-	7	8
Pittosporum tobira ("Wheeler's dwarf")	-	-	(H)	1	-	3	4	5	6	7	-
Raphiolepis indica (Indian hawthorne)	-	-	(H)	-	-	3	4	5	6	7	-
Rosmarinus officinalis (Rosemary)	(L)	-	-	-	-	-	4	-	-	-	-
Rosa sp. (Rose hybrids, grandifloras)	-	-	(H)	-	-	-	-	5	-	-	-





## VINES

	<u>WATER NEEDS</u>			<u>LANDSCAPE TYPES</u>							
	(L)	(M)	(H)	1	2	3	4	5	6	7	8
Antigonon leptopus (Rosa de montana)	(L)	-	-	-	-	-	-	-	-	7	8
Bougainvillea sp. (Bougainvillea)	(L)	-	-	1	-	3	4	5	-	7	-
Bignonia violacea (Violet trumpet vine)	-	(M)	-	-	-	-	-	-	6	-	-
Ficus pumila (Creeping fig)	-	(M)	-	-	-	3	4	-	-	-	-
Gelsemium sempervirens	-	(M)	-	-	-	-	-	-	6	-	-
Lonicera japonica halliana	-	(M)	-	-	-	-	-	5	6	-	-
Macfadyena unguis cati (Cat's claw)	(L)	-	-	-	-	3	4	5	6	-	-
Parthenocissus tricuspidata (Boston ivy)	-	(M)	-	-	-	3	4	5	6	-	-
Rosa banksiae (Lady's pink rose)	-	(M)	-	1	-	-	4	5	6	-	-
Tecomaria capensis (Cape honeysuckle)	-	-	(H)	-	-	-	4	5	6	-	-
Trachelospermum jasminoides (Star jasmine)	-	-	(H)	1	-	3	4	5	6	-	-
Wisteria sinensis (Chinese wisteria)	-	-	(H)	-	-	-	-	-	6	-	-

## GROUND COVERS

Acacia redolens prostrata	(L)	-	-	-	-	-	4	-	-	7	8
Baccharis 'centennial'	(L)	-	-	1	-	3	4	-	-	7	8
Cerastium tomentosum (Snow in winter)	-	(M)	-	-	-	3	-	5	6	-	-
Dalea greggii (Prostrate indigo)	(L)	-	-	-	-	3	4	-	-	7	8
Gazania sp. (South African daisy)	-	(M)	-	1	-	3	4	-	-	-	-
Lantana montevidensis	(L)	-	-	-	-	3	4	-	-	-	-
Myoporum parviflora	-	(M)	-	1	-	3	4	-	-	-	-
Ophiopogon japonicum (Mondo grass)	-	-	(H)	-	-	-	-	5	-	-	-
Rosmarinus officinalis prostratus	(L)	-	-	1	-	3	4	-	-	-	-
Verbena peruviana (Peruvian verbena)	(L)	-	-	-	-	-	4	-	6	7	8
V. tenuisecta (Moss verbena)	(L)	-	-	-	-	-	4	-	-	7	8

## WILD FLOWERS (Seasonal)

Baileya multiradita (Desert Marigold)	(L)	-	-	-	-	-	-	-	-	-	8
Dimorphotheca aurantica (African daisy)	(L)	-	-	-	-	-	-	-	-	-	8
Eschscholtzia californica (California poppy)	(L)	-	-	-	-	-	-	-	-	-	8
Lastenia glabrata (Goldfield)	(L)	-	-	-	-	-	-	-	-	-	8
Linum gradiflorum (Scarlet flax)	(L)	-	-	-	-	-	-	-	-	-	8



**WILD FLOWERS (continued)****WATER NEEDS****LANDSCAPE TYPES**

(L)	(M)	(H)	1	2	3	4	5	6	7	8
-----	-----	-----	---	---	---	---	---	---	---	---

Lupinus odoratus (Lupine)	(L)	-	-	-	-	-	-	-	-	8
Oenothera berlandieri	(L)	-	-	-	-	-	-	-	-	8
Orhocarpus purpurescens (Owl's clover)	(L)	-	-	-	-	-	-	-	-	8
Phacelia campanularia (California blue bell)	(L)	-	-	-	-	-	-	-	-	8

**SUCCULENTS AND CACTI**

Agave americana (Century plant)	(L)	-	-	-	-	-	4	-	-	7	8
A. vilmoriniana (Octopus agave)	(L)	-	-	-	-	-	4	-	-	7	8
Aloe arborescens (Giant aloe)	(L)	-	-	-	-	-	4	-	-	7	8
A. barbadensis (Aloe vera)	(L)	-	-	-	-	-	4	-	-	7	8
Carnegiea gigantea (Saguaro cactus)	(L)	-	-	-	-	-	4	-	-	7	8
Dasyliirion wheeleri (Spoon flower)	(L)	-	-	-	-	-	4	-	-	7	8
Euphorbia milii (Crown of thorns)	(L)	-	-	-	-	-	4	-	-	7	8
Fouquieria splendens (Ocotillo)	(L)	-	-	-	-	-	4	-	-	7	8
Echinocactus grussoni (Golden cactus)	(L)	-	-	-	-	-	4	-	-	7	8
Ferocactus wislizenii (Barrel cactus)	(L)	-	-	-	-	-	4	-	-	7	8
Hesperaloe parviflora (Red yucca)	(L)	-	-	-	-	-	4	-	-	7	8
Opuntia species (Staghorn species)	(L)	-	-	-	-	-	4	-	-	7	8
O. species (Prickly pear)	(L)	-	-	-	-	-	4	-	-	7	8
Yucca aloifolia (Spanish bayonet)	(L)	-	-	-	-	-	4	-	-	7	8
Y. brevifolia (Joshua tree)	(L)	-	-	-	-	-	4	-	-	7	8
Y. elata (Soaptree yucca)	(L)	-	-	-	-	-	4	-	-	7	8
Y. recurvifolia (Pendulous yucca)	(L)	-	-	-	-	-	4	-	-	7	8
Y. whipplei (Lord's candle)	(L)	-	-	-	-	-	4	-	-	7	8

**GRASS** Hybrid Bermuda #328**SEASONAL ANNUALS** Winter/Spring (W/S); Summer/Fall (S/F)

Pansies (W/S)

Snapdragon semi-dwarf (W/S)

Petonia (W/S)

Vinca (S/F)

Marigold (S/F)

Zinnia (S/F)



## APPENDIX II-A

# EXPLANATION OF INTERSECTION CAPACITY UTILIZATION AND LEVEL OF SERVICE





## APPENDIX II-A

### EXPLANATION OF INTERSECTION CAPACITY UTILIZATION

The capacity of a street is nearly always greater between intersection and less at intersections. The reason for this is that the traffic flows continuously between intersections and only part of the time at intersections. To study intersection capacity, a technique known as Intersection Capacity Utilization (ICU) has been developed. ICU analysis consists of (a) determining the proportion of signal time needed to serve each conflicting movement; (b) summing the times for the movements; and (c) comparing the total time required to the time available. For example, if for north-south traffic the northbound traffic is 1,000 vehicles per hour, the southbound traffic is 800 vehicles per hour, and the capacity of either approach is 2,000 vehicles per hour of green, then the northbound traffic is critical and requires  $1,000/2,000$  or 50 percent of the signal time. If for the east-west traffic, 40 percent of the signal time is required, then it can be seen that the ICU is 50 plus 40, or 90 percent. When left-turn phases exist, they are incorporated into the analysis. As ICU's approach 100 percent, the quality of traffic service approaches Level of Service (LOS) E, as defined in the Highway Capacity Manual, Special Report 87, Highway Research Board, 1965.

Level of Service is used to describe quality of traffic flow. Levels of Service A to C operate quite well. Level of Service D is typically the Level of Service for which an urban street is designed. Level of Service E is the maximum volume a facility can accommodate and will result in possible stoppages of momentary duration. Level of Service F occurs when a facility is overloaded and is characterized by stop-and-go traffic with stoppages of long duration. A description of the various levels of service appears on the following page.

The ICU calculations assume that an intersection is signalized and that the signal is ideally timed. Although calculating ICU for an unsignalized intersection is not valid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volumes. It is possible to have an ICU well below 1.0, yet have severe traffic congestion. This would occur because one or more movements is not getting enough time to satisfy its demand with excess time existing on other moves.

Capacity is often defined in terms of roadway width. However, standard lanes have approximately the same capacity whether they are 11 foot or 14 foot lanes. Our data indicates a typical lane, whether a through lane or left-turn lane has a capacity of approximately 1600 vehicles per lane per hour of green time. The 1985 Highway Capacity Manual found capacities of 1800 vehicles per lane per hour of green time; however the 1600 value has been widely utilized and results in a conservative analysis.



## APPENDIX II-A

### LEVEL OF SERVICE DESCRIPTIONS

<u>LEVEL OF SERVICE</u>		<u>NOMINAL RANGE OF ICU (a)</u>
A	Low volumes; high speeds; speed not restricted by other vehicles; all signal cycles clear with no vehicles; all signal cycles clear with no vehicles waiting through more than one signal cycle.	0.00 - 0.60
B	Operating speeds beginning to be affected by other traffic; between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.	0.61 - 0.70
C	Operating speeds and maneuverability closely controlled by other traffic; between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods; recommended ideal design standard.	0.71 - 0.80
D	Tolerable operating speeds; 31 to 70 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during traffic periods; often used as design standard in urban areas.	0.81 - 0.90
E	Capacity; the maximum traffic volumes an intersection can accommodate restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicle which wait through more than one signal cycle during peak traffic periods.	0.91 - 1.00
F	Long queues of traffic; unstable flow; stoppages of long duration; traffic volume and traffic speed can drop to zero; traffic volume will be less than the volume which occurs at Level of Service E.	Not Meaningful

a) ICU (Intersection Capacity Utilization) at various Levels of Service versus Level of Service E for urban arterial streets.



## APPENDIX II-B

### INTERSECTION CAPACITY UTILIZATION ANALYSES





# INTERSECTION CAPACITY UTILIZATION ANALYSIS

PROJECT: HIGHWAY 111 SPECIFIC PLAN  
INTERVAL: PM PEAK HOUR  
INTERSECTION: HIGHWAY 111 & COOK

MOVEMENT	EXIST LANS	PROP LANS	EXISTING CAPACITY	PROPOSED CAPACITY	EXISTING VOLUME	PROJECT VOLUME	OTHER VOLUME	EXISTING V/C	EXIST+PROJ V/C	EXIST+PROJ+OTHER V/C	EXIST+PROJ+OTHER V/C-W IMP
NL	1	2	1600	3200	104	10		0.07	0.07	0.07	0.04
NT	2	2	3200	3200	177	15		0.10*	0.11*	0.11*	0.11*
NR	0		0	0	141	5					
SL	1	2	1600	3200	256	625		0.16*	0.55*	0.55*	0.28*
ST	2	1	3200	1600	192	40		0.06	0.07	0.07	0.15
SR	1	1	1600	1600	172	55	60	0.11	0.14	0.18	0.18
EL	1	2	1600	3200	250	60	95	0.16*	0.19	0.25*	0.13
ET	2	3	3200	4800	792	725	20	0.26	0.50*	0.51	0.34*
ER	0	0	0	0	55	25					
WL	1	2	1600	3200	114	10		0.07	0.08*	0.08	0.04*
WT	2	3	3200	4800	737	365	15	0.23*	0.34	0.35*	0.23
WR	1	1	1600	1600	107	295		0.07	0.25	0.25	0.25
NORTH/SOUTH CRITICAL SUMS =								0.26	0.66	0.66	0.39
EAST/WEST CRITICAL SUMS =								0.39	0.58	0.60	0.38
CLEARANCE =								0.05	0.05	0.05	0.05
ICU VALUE =								0.70	1.29	1.31	0.82
LOS =								B	F	F	D

ICU SPREADSHEET FILE NAME: CO&111

N = NORTHBOUND, S = SOUTHBOUND

E = EASTBOUND, W = WESTBOUND

L = LEFT, T = THROUGH, R = RIGHT

N.S. = NOT SIGNALIZED

LOS = LEVEL OF SERVICE

\* DENOTES CRITICAL MOVEMENTS



# INTERSECTION CAPACITY UTILIZATION ANALYSIS

PROJECT: HIGHWAY 111 SPECIFIC PLAN  
INTERVAL: PM PEAK HOUR  
INTERSECTION: HIGHWAY 111 & RANCHO PALMERES DR.

MOVEMENT	EXIST	PROP	EXISTING	PROPOSED	EXISTING	OTHER	PROJECT	EXISTING	+ OTHER	+PROJECT	+PROJECT
LANES	LANES	LANES	CAPACITY	CAPACITY	VOLUME	VOLUME	VOLUME	V/C	V/C	V/C	V/C-W_IMP
NL	1	1	1600	1600	45		15	0.03 *	0.03 *	0.04 *	0.04 *
NT	1	1	1600	1600	4			0.02	0.02	0.02	0.02
NR			0	0	22						
SL	1	1	1600	1600	17			0.01	0.01	0.01	0.01
ST	1	1	1600	1600	9			0.03 *	0.03 *	0.03 *	0.03 *
SR			0	0	34						
EL	1	1	1600	1600	41			0.03	0.03	0.03	0.03
ET	2	3	3200	4800	1135	20	1280	0.37 *	0.37 *	0.78 *	0.52 *
ER			0	0	37		25				
WL	1	1	1600	1600	13		5	0.01 *	0.01 *	0.01 *	0.01 *
WT	2	2	3200	3200	654	15		0.27	0.27	0.27	0.27
WR			0	0	4						
NORTH/SOUTH CRITICAL SUMS =								0.06	0.06	0.07	0.07
EAST/WEST CRITICAL SUMS =								0.38	0.38	0.79	0.53
CLEARANCE =								0.05	0.05	0.05	0.05
ICU VALUE =								0.49	0.49	0.91	0.65
LOS =								A	A	E	B

ICU SPREADSHEET FILE NAME: RP8111

N = NORTHBOUND, S = SOUTHBOUND  
E = EASTBOUND, W = WESTBOUND  
L = LEFT, T = THROUGH, R = RIGHT  
N.S. = NOT SIGNALIZED  
LOS = LEVEL OF SERVICE  
\* DENOTES CRITICAL MOVEMENTS

ICU SPREADSHEET FILE NAME: RP111

N = NORTHBOUND, S = SOUTHBOUND  
E = EASTBOUND, W = WESTBOUND  
L = LEFT, T = THROUGH, R = RIGHT  
N.S. = NOT SIGNALIZED  
LOS = LEVEL OF SERVICE  
\* DENOTES CRITICAL MOVEMENTS



# INTERSECTION CAPACITY UTILIZATION ANALYSIS

PROJECT: HIGHWAY 111 SPECIFIC PLAN  
INTERVAL: PM PEAK HOUR  
INTERSECTION: HIGHWAY 111 & ELDORADO

MOVEMENT	EXIST	PROP	EXISTING	PROPOSED	EXISTING	OTHER	PROJECT	EXISTING	OTHER	PROJECT	EXISTING	OTHER	PROJECT
LANES	LANES	LANES	CAPACITY	CAPACITY	VOLUME	VOLUME	VOLUME	V/C	V/C	V/C	V/C	V/C	V/C
NL	1	1	1600	1600	30		20	0.02		0.02		0.03	0.03
NT	2	2	3200	3200	30		5	0.03	*	0.03	*	0.03	0.03
NR			0	0	72								
SL	1	1	1600	1600	80		30	0.05	*	0.05	*	0.07	0.07
ST	2	2	3200	3200	45		35	0.02		0.03		0.09	0.09
SR			0	0	31	15	175						
EL	1	2	1600	3200	66	20	300	0.04		0.05		0.24	0.12
ET	2	2	3200	3200	1060		960	0.34	*	0.34	*	0.67	0.67
ER			0	0	41		70						
WL	1	2	1600	3200	57		15	0.04	*	0.04	*	0.05	0.02
WT	2	2	3200	3200	833		475	0.27		0.27		0.43	0.43
WR			0	0	40		40						
NORTH/SOUTH CRITICAL SUMS =								0.08		0.08		0.12	0.12
EAST/WEST CRITICAL SUMS =								0.38		0.38		0.72	0.67
CLEARANCE =								0.05		0.05		0.05	0.05
ICU VALUE =								0.51		0.51		0.89	0.86
LOS =								A		A		D	D

ICU SPREADSHEET FILE NAME: ED%111

N = NORTHBOUND, S = SOUTHBOUND  
E = EASTBOUND, W = WESTBOUND  
L = LEFT, T = THROUGH, R = RIGHT  
N.S. = NOT SIGNALIZED  
LOS = LEVEL OF SERVICE  
\* DENOTES CRITICAL MOVEMENTS





# INTERSECTION CAPACITY UTILIZATION ANALYSIS

PROJECT: HIGHWAY 111 SPECIFIC PLAN  
INTERVAL: PM PEAK HOUR  
INTERSECTION: HIGHWAY 111 & CLUB DR

MOVEMENT	EXIST	PROP	EXISTING	PROPOSED	EXISTING	OTHER	PROJECT	EXISTING	+ OTHER	+PROJECT	+PROJECT
LANES	LANES		CAPACITY	CAPACITY	VOLUME	VOLUME	VOLUME	V/C	V/C	V/C	V/C-W_IMP
NL	1		1600	0	95			0.06	*	0.06	*
NT			0	0							
NR	1		1600	0	57			0.04		0.04	
SL			0	0							
ST			0	0				*	*	*	*
SR			0	0							
EL			0	0							*
ET	2		3200	0	963		1020	0.33	*	0.33	*
ER			0	0	103						
WL	1		1600	0	72			0.05	*	0.05	*
WT	2		3200	0	1025		365	0.32		0.32	*
WR			0	0							
NORTH/SOUTH CRITICAL SUMS =								0.06		0.06	
EAST/WEST CRITICAL SUMS =								0.38		0.38	
CLEARANCE =								0.05		0.05	
ICU VALUE =								0.49		0.49	
LOS =								A		A	

ICU SPREADSHEET FILE NAME: CL&111

N = NORTHBOUND, S = SOUTHBOUND  
E = EASTBOUND, W = WESTBOUND  
L = LEFT, T = THROUGH, R = RIGHT  
N.S. = NOT SIGNALIZED  
LOS = LEVEL OF SERVICE  
\* DENOTES CRITICAL MOVEMENTS



# INTERSECTION CAPACITY UTILIZATION ANALYSIS

PROJECT: HIGHWAY 111 SPECIFIC PLAN  
INTERVAL: PM PEAK HOUR  
INTERSECTION: HIGHWAY 111 & MANITOU-MILES

									EXISTING	EX.+OTHER	EX.+OTHER	
MOVEMENT	EXIST	PROP	EXISTING	PROPOSED	EXISTING	OTHER	PROJECT	EXISTING	+ OTHER	+PROJECT	+PROJECT	
	PLANES	PLANES	CAPACITY	CAPACITY	VOLUME	VOLUME	VOLUME	V/C	V/C	V/C	V/C-W_IMP	
NL	1	1	1600	1600	9		10	0.01	0.01	0.01	0.01	
NT	1	1	1600	1600	10		5	0.06 *	0.06 *	0.12 *	0.12 *	
NR			0	0	79		90					
SL	1	1	1600	1600	27		25	0.02 *	0.02 *	0.03 *	0.03 *	
ST	1	1	1600	1600	13		5	0.01	0.01	0.01	0.01	
SR	1	1	1600	1600	25		5	0.02	0.02	0.02	0.02	
EL	1	2	1600	3200	165		330	0.10 *	0.10 *	0.31 *	0.15	
ET	2	2	3200	3200	1095		520	0.35	0.35	0.53	0.53 *	
ER			0	0	10		60					
WL	1	2	1600	3200	12		10	0.01	0.01	0.01	0.01 *	
WT	2	2	3200	3200	819		325	0.26 *	0.26 *	0.36 *	0.36	
WR			0	0	6							
NORTH/SOUTH CRITICAL SUMS =								0.08	0.08	0.15	0.15	
EAST/WEST CRITICAL SUMS =								0.36	0.36	0.67	0.54	
CLEARANCE =								0.05	0.05	0.05	0.05	
ICU VALUE =								0.49	0.49	0.87	0.74	
LOS =								A	A	D	C	

ICU SPREADSHEET FILE NAME: MI&111

N = NORTHBOUND, S = SOUTHBOUND  
E = EASTBOUND, W = WESTBOUND  
L = LEFT, T = THROUGH, R = RIGHT  
N.S. = NOT SIGNALIZED  
LOS = LEVEL OF SERVICE  
\* DENOTES CRITICAL MOVEMENTS



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